



Australian
Competition &
Consumer
Commission

Determination

Applications for authorisation
A91546 & A91547

lodged by

Bendigo and Adelaide Bank Limited
Commonwealth Bank of Australia
National Australia Bank Limited
Westpac Banking Corporation

in respect of

a proposal to engage in limited
collectively bargaining with Apple and
limited collective boycott of Apple Pay

Date: 31 March 2017

Authorisation numbers:
A91546 & A91547

Commissioners:
Sims
Rickard
Schaper
Cifuentes
Court

Summary

The ACCC has decided to deny authorisation for Bendigo and Adelaide Bank, Commonwealth Bank, National Australia Bank and Westpac (**the Applicants**) and other potential participants to engage in limited collective bargaining and limited collective boycott with Apple in relation to access to the Near-Field Communication (**NFC**) controller on Apple devices and App Store access.

This is a complex matter involving emerging and dynamic markets and the ACCC is not satisfied, on balance, that the proposed conduct is likely to result in public benefits that would outweigh likely public detriments including from any lessening of competition or that the proposed conduct is likely to result in such a benefit to the public that it should be allowed to take place.

The proposed conduct

The Applicants on behalf of themselves and potentially other payment card issuers (together, **the Group Participants**) have sought authorisation to collectively bargain with Apple in respect of:

1. access to Apple iPhone's embedded NFC controller, in order for the Group Participants to provide their own digital wallets with embedded NFC on Apple devices without relying on Apple Pay for mobile payment processing (**NFC access**),
2. to allow their digital wallets to be distributed from Apple's App Store without any unreasonable prohibitions, unreasonable terms, or unreasonable approval delays from Apple (**App Store access**).

The Applicants have also sought authorisation for the Group Participants to agree that they will not to sign up to Apple Pay while participating in the collective negotiation. This means that they will not individually reach agreement with Apple to allow their cardholders to load their cards on to Apple's Wallet app (**Apple Wallet**) while participating in the collective negotiation. However, they would be entitled to withdraw at any time from the collective negotiation and enter into an individual agreement with Apple.

The Applicants made a number of changes to the proposed conduct since lodging the applications for authorisation in July 2016. Most recently, following the ACCC's draft determination, the Applicants advised that they are no longer seeking authorisation to collectively negotiate over the pass through of Apple Pay fees to cardholders.

Authorisation is sought for 18 months (the Applicants previously sought three years but subsequently shortened this period).

Industry background

Digital wallets and mobile payments

Digital wallets are applications on mobile devices that perform some of the functions of a physical wallet, such as storing payment cards, making mobile payments and, in some cases, storing other cards such as loyalty cards. Digital wallets are a relatively new

development and the relevant markets are characterised by rapid change and innovation, with new products and features being announced regularly. Digital wallets are currently offered by issuers for their own payment cards (**'issuer digital wallets'**) and by third parties such as Apple for payment cards from multiple issuers (**'multi-issuer digital wallets'**).

A common feature of digital wallets is to provide a **'mobile payment service'** that allows consumers to make **mobile payments**, which are payments performed with a mobile device at a point-of-sale terminal in a retail store. For example, Apple Wallet provides mobile payment services via Apple Pay to allow consumers to make mobile payments. Issuers pay Apple a fee for this service, which Apple provides through a combination of iPhone hardware (i.e. the NFC controller and the Secure Element) and software. Android Pay is also a mobile payment service provided by Google. On Android mobile devices, issuers can also provide their own mobile payment service.

On Apple's iOS operating system, Apple Wallet is the pre-installed digital wallet app that uses Apple Pay to make mobile payments. Apple Wallet (previously called Passbook) was launched along with iOS 6 in September 2012. Apple Pay was a feature of iOS 9 that launched in Australia in November 2015 with American Express as the only participating issuer. Since then, ANZ, 31 smaller banks and credit unions represented by Cuscal Ltd, ING Direct and Macquarie Bank have each made Apple Pay available to their cardholders. At the date of this decision, Apple lists 49 issuers who participate on the Apple Pay platform in Australia. Nevertheless, the majority of cardholders in Australia still do not have access to Apple Pay, as the three major Applicant banks make up around 65 per cent of credit card use in Australia. Globally, Apple Pay is available to cardholders of 3,500 banks across 12 countries.

On Google's Android operating system, two multi-issuer digital wallets are available – Android Pay (available on most Android devices) and Samsung Pay (available on select Android devices made by Samsung). On the Android platform, CBA, NAB and Westpac also provide their own issuer digital wallets with their own mobile payment services using the embedded NFC controller on these devices. That is, the issuer uses the Host Card Emulation (**HCE**) software on the device to incorporate a mobile payment service into their digital wallet, without having to rely on a third-party mobile payment service such as Apple Pay or Android Pay. Of the Applicants, Bendigo and Adelaide Bank, Westpac, and CBA-owned Bankwest have each signed up to enable their cardholders to make mobile payments through Android Pay. None of the Applicants have to date signed up for Samsung Pay for their cardholders.

Mobile operating systems

Apple and Google have different competitive strategies in relation to their mobile operating systems: Apple devices are supplied as an integrated hardware and software product, which enables Apple to maintain greater control over the user experience on its devices; in contrast, Google is not a hardware manufacturer but provides its Android operating system for free to hardware manufacturers. Google derives most of its revenue from advertising.

Apple's global approach is to offer Apple Pay to banks as an integrated hardware and software mobile payment service. Apple does not offer third party access to the embedded NFC controller in iPhones. If issuers wish to enable their cardholders to make mobile payments on iPhones using NFC technology, they may either use the Apple Pay service or they must provide external NFC hardware to make the mobile payment.

Google's Android platform allows third party apps to directly access the embedded NFC controller in Android devices. If issuers wish to enable their cardholders to make mobile payments on Android devices, issuers may use a multi-issuer digital wallet such as Android

Pay or Samsung Pay, implement their own mobile payment service with NFC access, or provide cardholders with external NFC hardware to make the mobile payment.

These different approaches in the degree of software and hardware integration in iPhones and Android phones have led to different systems for making mobile payments. Apple uses Secure Element hardware to store payment credentials in each device. Google, in contrast, uses HCE software to store payment credentials in a database external to the device. Issuer digital wallets such as those provided by CBA and NAB also use HCE to perform NFC mobile payments on Android devices.

The differences may flow through to the level of consumer choice and the simplicity of the mobile payment process and the security of mobile transactions. Broadly, Apple devices only allow Apple Pay to access the NFC controller, which provides a streamlined approach for users, but with fewer user choices – for example, Apple Pay is the only integrated mobile payment service. In contrast, Android devices allow users to manually configure any app to have default access to the NFC controller, thereby providing greater scope for customisation and functions but a potentially less streamlined payment process.

Mobile app stores

Apple's App Store is a digital distribution platform for mobile apps using Apple's iOS operating system. App developers can provide their apps, which are developed with Apple's iOS, on the iPhone and the App store allows users to download these applications onto their iPhone. Apple controls access to the App Store through published terms and conditions, which Apple states are 'to ensure that apps conform to Apple's technical and consumer experience requirements and minimum standards'. Each of the Applicants' mobile banking apps are examples of apps available on the App Store.

In contrast, the Google Play Store is one of several platforms through which users can download mobile apps for Android devices. Google controls access to the Google Play Store but does not control access to the other app stores.

Mobile payment technologies and devices

Currently, banks can offer digital wallets on iPhones and allow their customers to make mobile payments through the use of external NFC hardware. CBA and NAB currently offer digital wallets on iPhones using an NFC tag affixed to the back of the phone ('**NFC paytag**'). Westpac intends to launch a smart wristband fitted with an NFC chip this year.

There are also a range of other devices available in Australia and overseas that contain NFC technology allowing the user to make contactless payments through, for example, smart watches, fitness trackers, other wearables and smartcards. Although NFC is well established in Australian contactless payments, there are alternative technologies that may be used to make mobile payments. For example, Quick Response (**QR**) Codes are widely used in China and CBA has recently upgraded its 'Albert' point-of-sale terminals in Australia (which are a touchscreen tablet used by a range of retailers) to accept QR code payments.¹

¹ <https://www.commbank.com.au/business/merchant-services/eftpos-options/in-store/albert.html>.

ACCC assessment

The ACCC received submissions from over 30 interested parties on this matter, including a number of supporting submissions and economist reports from the Applicants and several opposing submissions and economist reports from Apple.

Addressing an imbalance in bargaining power

The Applicants submit that there is a significant imbalance of bargaining power between the Applicants individually and Apple and that the proposed conduct seeks to address this by increasing the Applicants' bargaining power so that they are in a better position to place pressure on Apple to depart from its global position of not allowing external access to its NFC controller on iPhones. The Applicants also propose to collectively negotiate the issue of App Store access to guard against Apple undermining NFC access through unreasonable restrictions on them distributing their digital wallets through the App Store.

The ACCC notes that while mobile payments are in their infancy, in Australia there has already been strong take-up by consumers of 'tap and go' payments with payment cards, which provide a very quick and convenient way to pay. Even during the months since these applications were lodged, there have been numerous developments in the offerings available both in Australia and internationally, allowing consumers a range of ways to make mobile payments. This demonstrates the highly dynamic nature of this market and the uncertainty about how digital wallets and mobile payments will develop in the face of current strong competitive constraint from using physical payment cards and possible future innovations.

In the case of using mobile phones to make payments, the ACCC notes that Apple is not a monopoly supplier. It faces competition from a range of other handset manufacturers and from Google's Android operating system to offer mobile hardware and software with competitive functionalities.

While iPhones accounted for only around 36 per cent of Australian smartphones in recent years, the ACCC accepts that Apple has significant bargaining power in negotiations with the individual Applicant banks over terms and conditions to allow their payment cards to be provisioned into Apple Wallet. This is a result of Apple's vertical integration from device hardware to operating system software through to mobile application software, the global nature of its business and its global stance on not allowing direct access to the NFC controller on iPhones.

Authorisation would allow the Applicants to join together and increase their bargaining power in negotiations on NFC access and App Store access. Together, the three major Applicants account for around 65 per cent of credit card use in Australia and by collectively bargaining and boycotting Apple, the Applicants would be in a stronger bargaining position with Apple relative to individual negotiations by each party.

ACCC's approach to considering the likely public benefits and detriments from the proposed conduct

The key issue for the ACCC is whether it is satisfied that, in all the circumstances, the proposed conduct is likely to result in a public benefit, and that public benefit will outweigh any likely public detriment, including any lessening of competition.

The Applicants outline a number of possible outcomes from collective bargaining, noting that ultimately it is likely that some agreement will be reached between the Applicants and Apple and that there are likely benefits from allowing them to engage in the proposed conduct. Most of the claimed public benefits assume the Applicants are successful in their negotiations with Apple and therefore relate to the likely outcomes of a successful negotiation (e.g. increased competition in mobile payment services). These claimed benefits differ from types of claimed benefits usually relied on by applicants for collective bargaining and/or boycotts which typically relate to efficiencies likely to arise from the negotiating process itself (e.g. transaction cost savings).

The ACCC notes that Apple has taken a global decision to offer an integrated mobile payment service on iPhones which does not allow open access to the NFC. Apple submits that even if authorisation is granted it will not grant NFC access, and therefore the proposed conduct cannot lead to any of the public benefits claimed. Apple also submits that its terms and conditions for access to the App Store are global conditions which would not be amended to impede or prevent the Applicants from making digital wallet apps available via the App Store.

The ACCC is required to take into account submissions made in relation to the application. This includes taking into account the public benefits claimed by the Applicants. In assessing the applications for authorisation, in order to determine whether the claimed public benefits and detriments are likely to result, it is open to the ACCC to consider the likely outcome of the collective negotiations. However, in this instance, rather than attempting to predict the likely outcomes from the collective negotiations, the ACCC has assessed whether the claimed public benefits are likely to arise assuming that the Applicants were successful in negotiating NFC access and App Store access, and weighed these against the likely public detriment including from any resulting lessening of competition. For the reasons outlined, on balance the ACCC is not satisfied that there would be a net public benefit likely to arise from the proposed conduct.

Public benefits

As noted above, the ACCC has considered whether, if the Applicants are successful in negotiating NFC access and App Store access, that access is likely to result in public benefits.

NFC access

The Applicants submit that the proposed conduct would increase their likelihood of being able to offer their own digital wallets to iPhone users without relying on Apple Pay for making mobile payments. The ACCC considers that NFC access and the collective negotiations more generally are likely to result in:

- a significant public benefit from increased competition, consumer choice, innovation and investment in mobile payment services
- a small public benefit from increased competition and consumer choice in digital wallets
- no public benefit from increased innovation and investment in other applications of NFC technology
- no public benefit from increased adoption of mobile payments in Australia

- a small public benefit from reduced information asymmetry, and
- no public benefit from facilitation of market dynamics or transaction cost savings.

Increased competition in mobile payment services

Due to the established NFC payments infrastructure in Australia (i.e. terminals in retail outlets that use NFC technology), the ACCC accepts that NFC access is likely to increase competition and consumer choice in mobile payment services on iPhones.

The ACCC considers that lack of NFC access on iPhones prevents the Applicants from directly competing with Apple Pay in the supply of mobile payment services using the embedded NFC controller on iOS devices. The ACCC also accepts that access to NFC technology and iPhone customers are both likely to be important for the success of a mobile payment service in Australia. NFC access would allow the Applicants to provide their own integrated mobile payment service on iPhones using NFC technology, providing a competitive constraint on Apple in its pricing for Apple Pay and bringing additional benefits to consumers arising from the competitive disciplines and incentives to innovate and offer competing services.

However, although only Apple Pay may access the embedded NFC controller on iPhones to make mobile payments, there is some ability for issuers to bypass Apple Pay by using external NFC hardware (e.g. an NFC paytag or other NFC-capable device). Using external NFC hardware would allow the Applicants to offer mobile payments on iPhones without using Apple Pay. CBA and NAB both currently offer mobile payments on iPhones by providing cardholders with NFC paytags and Westpac has announced that it intends to issue a smart wristband with an NFC chip to enable iPhone users to make mobile payments.² This competitive response indicates that external NFC hardware is at least a partial substitute for in-device NFC access. However, the ACCC accepts the Applicants' submission that there are disadvantages in not using the in-built NFC controller on Apple devices.

In addition, the ACCC recognises the importance of NFC technologies in the Australian payments landscape, which may limit the scope for alternative technologies, such as QR codes, to be adopted as a possible competitive response.

The ACCC therefore considers that NFC access is likely to result in a significant public benefit from increased competition in mobile payment services on iPhones. This increased competition, particularly in the short term, is likely to provide a competitive constraint on Apple in its pricing for Apple Pay and increase competition, innovation and investment in mobile payments made via the embedded NFC controller on Apple devices.

Increased competition in digital wallets

The Applicants submit that NFC access is also likely to increase competition and consumer choice in digital wallets. As mobile payments are one of the key features of digital wallets, the ACCC considers that the increased competition in mobile payments is likely to result in a small public benefit as a result of the flow through of increased competition and consumer choice in the provision of digital wallets.

2 Australian Financial Review, 'Westpac raises tech stakes with wearables and social messaging payments', 20 March 2017: <http://www.afr.com/technology/apps/business/westpac-raises-tech-stakes-with-wearables-and-social-messaging-payments-20170315-guylwj>.

However, there are other features of digital wallets on which the Applicants may compete without the need for NFC access. Therefore, the magnitude of any increased competition and consumer choice in digital wallets is limited to some extent by existing opportunities that allow the Applicants to provide competing digital wallets. Because it is only the aspect of making mobile payments that requires NFC access to interact with the established payment infrastructure in Australia, the ACCC considers that the Applicants may currently compete on all features of digital wallets aside from mobile payments via the embedded NFC controller on iPhones. This includes the ability to offer consumers digital wallet apps with features such as balance updates and transaction history, loyalty rewards functions, user authentication and building access.

Moreover, the ACCC is concerned that any increase in competition in digital wallets may be limited in the event the Applicants are successful in achieving NFC access. The ACCC considers that the Applicants, as providers of banking services, have commercial incentives to favour their own digital wallets over multi-issuer digital wallets. Encouraging cardholders to use an issuer digital wallet may allow the issuer to maintain greater control over its customer relationships. It would also allow the bank to avoid any fees charged by multi-issuer wallets and any increased competition between payment cards at point-of-sale brought about by multi-issuer wallets. Therefore, the ACCC considers that the Applicants' incentives to favour their own wallets will limit the public benefits of increased competition between digital wallets.

Overall, the ACCC considers that NFC access is likely to result in a small public benefit from increased competition in digital wallets.

Increased innovation and investment in other applications of NFC technology

The ACCC does not consider that there is likely to be any public benefit arising from increased innovation and investment in other applications of NFC technology.

Whilst there is the potential for NFC access to increase innovation and investment in other applications of NFC technology, the ACCC is not satisfied that NFC access for the Applicants is likely to result in greater innovation and investment in comparison to the status quo, where there is currently continuing and growing levels of innovation and investment in the development of a range of applications using a wide variety of wireless communication technologies and devices for consumers.

Increased adoption of mobile payments in Australia

The ACCC is not satisfied that NFC access, through increasing competition and choice between digital wallets, is likely to lead to public benefits from increased adoption of mobile payments or that that this greater adoption of mobile payments is likely to lead to more efficient use of the existing Australian payments infrastructure.

While the ACCC has recognised a small public benefit from increased competition in digital wallets resulting from NFC access, the ACCC notes that in the likely future without the conduct, the Applicants will either each negotiate separately with Apple to make their cards available on Apple Pay or not at all. It is therefore not clear to the ACCC that NFC access for the Applicants would result in Australian consumers being more likely to adopt mobile payments.

In addition, the emerging markets for digital wallets and mobile payment services are subject to rapid innovation and change, which is already producing an increasing variety of mobile payment services, mobile payment devices, and digital wallet apps (as noted above). These

developments will also affect the adoption of mobile payments in Australia and it is not clear the extent to which NFC access for the Applicants is likely to result in a greater adoption of mobile payments.

Given these uncertainties in how the relevant emerging markets are likely to develop with and without the proposed conduct, the ACCC is not satisfied that it is likely that NFC access will result in a greater adoption of mobile payments or a more efficient use of the existing Australian payments infrastructure.

Reduced information asymmetry

The ACCC considers that there is likely to be a small public benefit from the proposed conduct making it more likely that Group Participants obtain better information from Apple and thereby may make more informed decisions as to whether to enter into an agreement with Apple and on what terms. The ACCC notes, however, that most of this information may also be available in individual negotiations with Apple.

App Store access

Prior to the release of the ACCC's draft determination, the Applicants amended the scope of the proposed conduct to clarify that the scope of the collective negotiation includes App Store access. The Applicants submit that this was included to ensure that any NFC access granted as a result of successful negotiations would not be undermined by unreasonable restrictions imposed by Apple on the Applicants for access to the App Store. The ACCC is not satisfied that there would be any likely public benefits from authorising collective negotiation and collective boycott on this issue.

Public detriments

As noted above, the ACCC has considered whether if the Applicants are successful in negotiating NFC access, that access is likely to result in public detriments. The ACCC considers that NFC access and the collective negotiations more generally are likely to result in:

- a significant public detriment from distorting competition between mobile operating systems
- a significant public detriment from distorting competition in the emerging market for mobile payment devices
- some public detriment from reducing competition between payment cards, with the potential for this detriment to be significant, and
- a small public detriment from delaying the expansion of Apple Pay in Australia.

Distorting competition in mobile operating systems

The ACCC considers that NFC access is likely to result in a significant detriment from distorting competition between mobile operating systems.

As already noted, Apple's iOS operating system is a differentiated offering that competes globally against other mobile operating systems, particularly Google's Android operating

system. A key differentiating feature of iOS and Android is that the iOS operating system software is integrated with the device hardware, whereas the Android operating system software is typically supplied separately to the device hardware. One of the features offered by mobile operating systems is mobile payment services and the digital wallets that are available. An aspect of the competition between iOS and Android therefore involves their different approaches to making mobile payments. The Applicants currently have NFC access on Android phones and essentially seek a similar level of NFC access on iPhones.

If the Applicants are successful in obtaining NFC access, this would affect Apple's current integrated hardware-software strategy for mobile payments and operating systems more generally, thereby impacting how Apple competes with Google. In particular, NFC access may involve modifications to Apple's software or hardware that lessen the degree of differentiation between the iOS platform and the Android platform.

NFC access is also likely to result in a different consumer experience for making mobile payments on iPhones by altering some aspect of Apple's software or hardware to accommodate multiple digital wallets having access to the NFC controller in iPhones. This impact on the consumer experience is also likely to impact competition between mobile operating systems.

Distorting competition in mobile payment devices

The ACCC considers that NFC access is also likely to result in a significant public detriment from distorting competition in the emerging market for mobile payment devices. The iPhone is not a monopoly facility for making mobile payments. In this early stage in the development of mobile payments, a number of alternatives are emerging, at least some of which represent a competitive response to Apple Pay.

Assuming that Apple opens access to its NFC controller as a result of the proposed conduct, this is likely to distort competition in mobile payment services by artificially directing the development of these emerging markets to the use of the NFC controller in smartphones. This is likely to hamper the innovations that are currently occurring around different devices and technologies for mobile payments.

Reducing competition in payment cards

The ACCC considers that NFC access is likely to result in some public detriment, with the potential for this to be significant, from reducing competition in the provision of payment cards.

Multi-issuer digital wallets such as Apple Wallet and Android Pay are likely to increase competitive tension between payment card issuers by increasing the ease of consumer switching. Multi-issuer digital wallets are also likely to directly facilitate competition between payment cards at the point-of-sale by allowing issuers to offer competing promotions to consumers at the time of purchase.

The incentives of issuers to favour their own wallets over multi-issuer digital wallets are likely to have the effect of reinforcing the use of one payment card as a default card; whereas multi-issuer digital wallets would not have the same effect. The use of multi-issuer digital wallets would put more pressure on issuers to compete in the provision of payment card services.

To the extent NFC access would bias the development of issuer digital wallets over multi-issuer digital wallets, these potential benefits are likely to be lost.

Delaying the expansion of Apple Pay

Lastly, the ACCC considers that the proposed conduct is likely to result in a small public detriment from delaying the availability of Apple Pay to consumers for the period of the authorisation.

The authorisation sought would allow the Group Participants to collectively agree not to sign up to Apple Pay for the next 18 months while they are negotiating with Apple. Given the differentiating characteristics of Apple Pay and other mobile payment services, a delay in being able to access Apple Pay functionality during the proposed conduct is likely to result in a small public detriment in the form of decreased consumer choice for the duration of the proposed conduct.

Removal of the issue of pass-through of fees

Since the ACCC's draft determination, the Applicants amended their application so that they no longer seek authorisation to collectively negotiate the ability to pass through Apple fees to their cardholders. The ACCC had considered that there was likely to be some public benefit from letting market forces determine whether issuers pass on the Apple Pay fees to consumers (as opposed to a contractual restriction imposed by Apple) and that the threat of such pass through would be likely to constrain Apple in setting the size of these fees. This public benefit is no longer likely to arise from the amended conduct.

However, the ACCC also considered that there was a risk that allowing issuers to pass through fees may provide the Applicants with the scope to discriminate against Apple Pay and Apple Wallet in favour of their own digital wallets in a way which would distort competition. This public detriment is also removed from the ACCC's consideration of the proposed conduct.

Conclusion

Based on the material that has been put before the ACCC, both before and after the Draft Determination, the ACCC remains of the view that, while there are a number of public benefits likely to arise from the proposed conduct, with one being significant, they are outweighed by a number of significant and other detriments. The ACCC is therefore not satisfied that the proposed conduct is, on balance, likely to result in public benefits that would outweigh likely public detriments or that the proposed conduct is likely to result in such a benefit to the public that it should be allowed to take place.

Therefore the ACCC has decided not to grant authorisation.

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Glossary

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| acquirer | A financial institution that receives payment card payments on behalf of a merchant and may also provide other services to merchants, e.g. supply of point-of-sale equipment. |
| ADI | Authorised Deposit-taking Institution. |
| API | An application programming interface (API) means to a way for software to interact with other software, e.g. an interface for a mobile application to communicate with a mobile operating system. |
| app | A software application running on a smart mobile device. |
| Apple Pay | Apple's proprietary digital payment service that makes: <ul style="list-style-type: none"> • mobile payments at the point-of-sale in a retail store, if the terminal accepts NFC payments, and • online payments within other apps and within the Safari browser. |
| App Store | Apple's App Store is the only platform for distribution and purchase of software applications and mobile apps for Apple devices. |
| Apple Wallet | The Wallet app (previously known as Passbook) is pre-installed on iPhones and holds payment cards and passes for flights, coupons, tickets, etc. For NFC-capable iPhones, it also allows online payments and mobile payments via Apple Pay. |
| biometric authentication | Methods of authentication based on some intrinsic characteristic of a user often used in smart mobile devices, e.g. fingerprint identification, an eye scan or a heart rate sensor. |
| Capital One | A large bank based in the United States of America. It offers financial products and services to consumers, small businesses and commercial clients in the US, Canada and the UK. |
| card scheme | A payment network in which financial institutions can participate in order to facilitate card payments between cardholders and merchants, e.g. Visa, MasterCard, American Express. |
| digital wallet | An app on a mobile device that performs some of the functions of a physical wallet, including storing payment cards for making mobile payments and, in some cases, storing other cards such as loyalty cards. |
| HCE | Host Card Emulation (HCE) allows sensitive data to be stored in the cloud, or a database external to the device. This means that the device itself does not hold any sensitive information that could be stolen along with the device. |
| Google Play Store | The Google Play Store is one of several platforms available for distributing mobile apps for Android devices. |
| issuer | A financial institution that issues a credit or debit card to a cardholder. |

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| issuer digital wallet | A digital wallet that is offered by an issuer for that issuer's payment cards, e.g. Commbank app, ANZ Mobile Pay app, NAB Mobile Banking app. |
| mobile payment | A contactless payment performed with a mobile device rather than a payment card at a point-of-sale terminal in a retail store. |
| mobile payment devices | Portable devices equipped with the requisite hardware and software (such as an NFC controller for NFC contactless payments) that allow a consumer to make mobile payments. |
| mobile payment service | A common function provided by mobile payment hardware and software that enables a consumer to make mobile payments. |
| MST | Magnetic Secure Transmission (MST) is a technology that emits a magnetic signal that mimics the magnetic strip on a traditional payment card |
| multi-issuer digital wallet | A digital wallet that is able to hold payment cards issued by multiple issuers, e.g. Apple Wallet app, Android Pay app, Google Wallet app, etc. |
| NFC³ | Near-Field Communication (NFC) is a set of technology standards and protocols for controller communications over a short distance, typically 4cm or less. Contactless cards and certain mobile devices can transmit payment information via NFC to compatible point-of-sale terminals. |
| NFC paytag⁴ | An external chip that can store information that can be read by an NFC-enabled device, often in the form of a sticker that can be attached to the back of a smartphone. |
| online payments | Payments performed over a mobile data network to facilitate the sale and purchase of goods and services online. Online payments may be made within an app via an internet browser. |
| payment card | A debit or credit card issued in Australia. |
| peer-to-peer payments | Payments involving the direct transfers of funds between two individuals' bank accounts. |
| QR Code | A 'Quick Response Code' (QR Code) is a two-dimensional evolution of the traditional barcode which allows complex information to be encoded in visual form. QR Codes may be displayed on a mobile phone screen and scanned by a QR Code-enabled point-of-sale terminal. |
| Secure Element | A chip built into a mobile device that is isolated from other hardware components with a restricted access interface and strong encryption. |
| smart cards | An electronic payment device that resembles a payment card but is equipped with in-built processors and other hardware that allows it to perform functions like store multiple credit, debit, gift, loyalty and membership cards, make point-of-sale payments, perform biometric identification, provide proximity alerts, etc. |

3 NFC Forum Glossary, 'Near Field Communication': <http://nfc-forum.org/what-is-nfc/resources/glossary/#n>

4 NFC Forum Glossary, 'Near Field Communication': <http://nfc-forum.org/what-is-nfc/resources/glossary/#n>

| | |
|---------------------|---|
| tokenisation | A process by which the actual credit card number is removed and replaced with a randomly generated number (the 'token') that is usually only valid within limited parameters. |
|---------------------|---|

The applications for authorisation

1. On 26 July 2016, Bendigo and Adelaide Bank, Commonwealth Bank of Australia (**CBA**), National Australia Bank (**NAB**) and Westpac Banking Corporation (**Westpac**), (the **Applicants**), lodged applications for authorisation⁵ (A91546 and A91547) with the ACCC. The Applicants sought authorisation on behalf of themselves and potentially other credit and debit card issuers to engage in limited collective negotiation with providers of third party digital wallet services on three issues described as relating to 'competition, best practice standards, and efficiency and transparency'. The Applicants also sought authorisation to enter into a limited form of collective boycott in relation to third-party digital wallets while collective negotiations with that provider were ongoing. The collective boycott would not be formally monitored or enforced. The Applicants originally sought authorisation for three years.
2. On 30 September 2016, the Applicants amended the proposed conduct for which authorisation was sought, in response to interested party submissions, as follows:
 - a. the focus for collective bargaining is to be Apple
 - b. the scope of the issues for collective bargaining was to include access to the NFC controller in iPhones, security standards, and the ability to charge fees for the use of Apple Pay, and
 - c. the potential collective bargaining group could include both payment card issuers and retailers.
3. On 27 October 2016, the Applicants further amended the proposed conduct for which authorisation was sought, as follows:
 - a. the target for collective bargaining was narrowed to only Apple
 - b. the collective bargaining group includes only entities offering credit or debit cards, being the Applicants and other financial institutions and retailers who have their own or co-branded credit cards
 - c. the scope of the issues for collective bargaining was narrowed to remove the issue of security standards, which will be left to individual negotiations
 - d. the scope of the collective negotiation in respect of fees relates to removal of any 'no pass through' restriction, and does not include the fees to be charged by Apple or by individual issuers
 - e. the scope of the collective negotiation includes access to NFC as well as the ability to provide competing digital wallets without Apple unreasonably impeding or preventing this, for example through mechanisms such as unreasonably prohibiting access to the App Store, providing access to the App Store on unreasonable terms or unreasonably delaying the approval of the app and its availability in the App Store.⁶

5 Authorisation is a transparent process where the ACCC may grant protection from legal action for conduct that might otherwise breach the *Competition and Consumer Act 2010* (the **CCA**). Applicants seek authorisation where they wish to engage in conduct which is at risk of breaching the CCA but nonetheless consider there is an offsetting public benefit from the conduct. Detailed information about the authorisation process is available in the ACCC's Authorisation Guidelines at www.accc.gov.au/publications/authorisation-guidelines-2013.

6 The original scope of collective negotiation on NFC access included 'conduct otherwise preventing or impeding card issuers from developing, deploying or participating in any other mobile payment or mobile wallet services or Third Party Wallets on any mobile devices or platforms'.

4. On 9 February 2017, the Applicants further changed the proposed conduct by:
 - a. removing the issue of pass-through of fees, and
 - b. limiting the period of authorisation sought to 18 months.
5. While submissions were received covering the original scope of the conduct, only aspects of submissions relevant to the amended proposed conduct (as set out in more detail in the next section) have been included in this determination. The Applicants also requested interim authorisation to enable them to engage in the proposed conduct while the ACCC is considering the substantive applications. The ACCC decided not to grant interim authorisation on 19 August 2016.⁷
6. On 29 November 2016 the ACCC issued a draft determination proposing not to grant authorisation. A conference was not requested following the draft determination.

The proposed conduct (as amended)

7. The Applicants seek authorisation, for themselves and for other issuers of credit or debit cards who wish to join, to:
 - a. collectively bargain with Apple on the issues identified in paragraph 9 below, and
 - b. enter into a limited form of collective boycott as described in paragraphs 12 to 14
(collectively referred to throughout as the **proposed conduct**).
8. The applications are made on behalf of the Applicants as well as other issuers of payment cards in Australia (collectively referred to as the **Group Participants**). The Group Participants may include other financial institutions as well as large retailers who have their own or co-branded credit cards.

The collective bargaining

9. Following the amendments to the proposed conduct, the issues on which the Applicants wish to collectively negotiate with Apple are:
 - a. to access the in-device NFC controller built into iPhones (**NFC access**) in order to offer issuer digital wallets on iPhones with their own mobile payment service, and
 - b. for those issuer digital wallets to be distributed from Apple's App Store without any unreasonable prohibitions, unreasonable terms, or unreasonable approval delays from Apple (**App Store access**)⁸

(collectively referred to throughout as the **relevant issues**).
10. The Applicants submit that information-sharing protocols will apply to prevent any exchange of confidential or commercially sensitive information other than as necessary for the specific purposes of collective negotiation of the relevant issues.⁹

7 The ACCC's decision regarding interim authorisation dated 19 August 2016 can be viewed at <http://registers.accc.gov.au/content/index.phtml/itemId/1197444/fromItemId/278039/display/acccDecision>.

8 Applicants' letter to the ACCC received 27 October 2016, page 1.

11. Additional payment card issuers may elect to participate in the collective negotiation after it has commenced, on the understanding that any decisions made prior to a party joining will not be open to reconsideration.

The limited collective boycott

12. The Applicants propose that participants in the collective bargaining group will agree not to sign up to Apple Pay (i.e., will not individually reach agreement with Apple to allow their cardholders to load their cards on to Apple Wallet) while participating in the collective negotiation. However, participants are free to negotiate individually with Apple on all issues other than the relevant issues above at any time, including during the period of collective negotiation.¹⁰
13. The Applicants expect participants in the collective negotiation not to conclude individual negotiation with Apple until the collective negotiation has been concluded.¹¹ However, this is not a requirement.
14. The Applicants expect any participant who wishes to withdraw from the collective negotiation group to notify the group. No penalties will apply for withdrawal.¹²

Duration

15. The Applicants seek authorisation for 18 months.
16. The Applicants expect to commence collective bargaining as soon as possible and no later than a month after authorisation is granted.
17. Once commenced, any collective bargaining and limited collective boycott would continue for a maximum of 12 months, unless extended by the agreement of the collective negotiation group, up to a maximum period of 18 months from authorisation.
18. The collective negotiation will continue until the parties are satisfied with the result or conclude that there is no value in continuing the collective negotiation.¹³

Rationale

19. The Applicants submit that the proposed conduct is necessary to reduce the disparity in bargaining power between Apple and each of the Applicants individually in negotiations on the relevant issues, thereby increasing the likelihood of achieving their objectives.¹⁴ They argue that this would result in public benefits including increased competition,

9 Information regarding the proposed collective negotiation framework is set out in Applicants' submission received 7 October 2016, page 45, Applicants' letter to ACCC received 27 October 2016, and Applicants' letter to ACCC re provision of further information, received 5 September 2016.

10 Applicants' submission received 7 October 2016, page 6.

11 Applicants' letter to ACCC received 27 October 2016, page 4.

12 Applicants' letter to ACCC received 27 October 2016, page 4.

13 Applicants' letter to ACCC received 30 September 2016, page 3.

14 Applicants submission received 7 October 2016, pages 9-19.

customer choice and confidence, innovation and investment in digital wallets and mobile payment services in Australia.¹⁵

20. The Applicants submit that Apple has particularly significant bargaining power in these negotiations due to its ownership of and control over the operating system, mobile hardware and permissible mobile software on iPhones, which means Apple has the ability to control digital wallet access for iPhone users, who represent a key segment of the addressable market for digital wallet providers.
21. The Applicants submit that Apple's bargaining power is illustrated by the introduction of Apple Pay in other countries on an 'exclusive basis' on the iPhone platform, i.e. Apple has not provided third party apps with access to the NFC controller in its devices.
22. The Applicants submit that Australia remains a small market compared to the United States of America (**US**) and the United Kingdom (**UK**), and Australian banks have much less bargaining power in dealings with Apple, compared with the major overseas banks. The Applicants submit that collective negotiation and boycott will be required in Australia to overcome the disadvantages the Applicants will face in individual negotiations with Apple.
23. The Applicants submit that Apple is unlikely to lose iPhone customers if the Applicants do not sign up to Apple Pay. The Applicants consider that these factors further increase Apple's bargaining power.

Background

Mobile payments and mobile payment services

Meaning of 'mobile payments' in this determination

24. The Applicants have described mobile payments in a broad way to denote payments or transfers of money initiated on a mobile device such as a mobile phone or tablet, which includes instore payments, online shopping, peer-to-peer payments, etc.¹⁶
25. For the purposes of this determination, the ACCC uses the term '**mobile payment**' in a narrower sense to refer only to a payment performed using a mobile device at a point-of-sale terminal in a retail store. A common feature of digital wallets is to provide a '**mobile payment service**' that allows consumers to use the digital wallet app to make a mobile payment. For example, Apple Wallet provides a mobile payment service with Apple Pay, which uses a combination of hardware (namely the NFC controller and the Secure Element) and software in an Apple device.
26. This ACCC determination therefore distinguishes mobile payments from other types of payments able to be made from digital wallets, such as:
 - a. **online payments**, which refer to payments performed over the internet to facilitate the sale and purchase of goods and services online. Online payments

¹⁵ Applicants submission received 7 October 2016, pages 19-26.

¹⁶ Applicants' submission in support of the applications for authorisation received 26 July 2016, pages 16-17.

tend not to use NFC technology. E.g. Apple Pay can also make online payments through the Safari browser

- b. **peer-to-peer payments**, which involve the direct transfers of funds between two individuals' bank accounts. Peer-to-peer payments tend not to incur interchange fees. E.g. issuer digital wallet apps will also often allow peer-to-peer payments involving the direct transfer of funds between two individuals' bank accounts.

27. The narrower meaning of 'mobile payment' used in this determination is to specifically denote the in-store payments that require NFC technology to interact with the established NFC-based payment infrastructure in Australia.

28. These are the type of payments the Applicants would be able to offer to iOS users if they obtained NFC access.

Mobile payment services and digital wallets

29. A mobile payment service is commonly one of the features offered in a digital wallet. The table below provides examples of digital wallets and mobile payment services:

| Provider | Digital wallet | Mobile payment service |
|-------------------------|--|---|
| Apple | Apple Wallet app ¹⁷ |  Apple Pay |
| Google |  Android Pay app ¹⁸  Google Wallet app ¹⁹ |  Android Pay No mobile payment services, peer-to-peer payments only |
| Samsung |  Samsung Pay app ²⁰ | Samsung Pay  |
| ANZ |  ANZ Mobile Pay ²¹ (Android)  ANZ goMoney (iOS) |  ANZ Mobile Pay (Android) ²²  Apple Pay (iOS) |
| American Express |  Amex Mobile |  Apple Pay |
| CBA |  Commbank app ²³ | CommBank Tap & Pay ²⁴ |

17 <https://support.apple.com/en-au/HT204003>.

18 <https://play.google.com/store/apps/details?id=com.google.android.apps.walletnfcrel>.

19 <https://play.google.com/store/apps/details?id=com.google.android.apps.walletnfcrel>.

20 <https://play.google.com/store/apps/details?id=com.samsung.android.spay>.

21 <https://play.google.com/store/apps/details?id=com.anz.mobilepay>.

22 <http://www.anz.com/personal/ways-bank/mobile-banking/mobile-pay/>.

23 <https://play.google.com/store/apps/details?id=com.commbank.netbank>.

24 <https://www.commbank.com.au/personal/online-banking/commbank-app/tap-and-pay.html>.

| Provider | Digital wallet | Mobile payment service |
|----------|--|--------------------------------------|
| Westpac |  Westpac Mobile Banking app ²⁵ | Westpac tap and pay ²⁶ |
| NAB |  NAB app ²⁷ | Android Pay NAB Pay ²⁸ |

30. As demonstrated in this table, digital wallets and mobile payments can be supplied by the same provider (e.g. Apple Wallet and Apple Pay) or by different providers (e.g. Amex Mobile and Apple Pay). There are also digital wallets that do not provide a mobile payment service (e.g. Google Wallet).

Mobile payment services in Australia

31. Two key features of mobile payment services in Australia are that:
- mobile payments in Australia tend to require **NFC technology** to interact with point-of-sale merchant terminals (see further section on *Mobile payment technologies* below), and
 - 'open-loop' mobile payments in retail stores involve a debit or credit card scheme and involve a network of **transaction fees** paid to and from the parties of the card scheme.
32. Australia has a high penetration of NFC-enabled contactless payment terminals, high levels of smartphone ownership, and widespread use of contactless payments, but low use of mobile payments.
33. Prior to the introduction of any multi-issuer digital wallet in Australia in November 2015, it was estimated there were around 400,000 to 500,000 contactless mobile payment users spending around \$8 million per month (around 8 per cent of smartphone owners had made a mobile payment).²⁹
34. Despite the currently small percentage of mobile payments, this is an area of potentially rapid innovation and growth in Australia. In Canada, for example, the average annual growth rate from 2008 to 2011 for the volume of mobile payments and peer-to-peer payments was around 40 per cent.³⁰

Mobile payment technologies

35. To make mobile payments, the mobile device communicates with the payment terminal via a wireless communication technology such as:
- NFC
 - Quick Response Codes, and

25 <https://play.google.com/store/apps/details?id=org.westpac.bank>.

26 <https://info.westpac.com.au/personal-banking/mobilepayments/>.

27 <https://play.google.com/store/apps/details?id=au.com.nab.mobile>.

28 <http://www.nab.com.au/sites/personal/accounts/nab-pay>.

29 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 26.

30 Department of Finance Canada, Balancing Oversight and Innovation in the Ways We Pay: A Consultation Paper, 13 April 2015: <https://www.fin.gc.ca/activty/consult/onps-ssnp-eng.asp>.

c. Magnetic Secure Transmission.

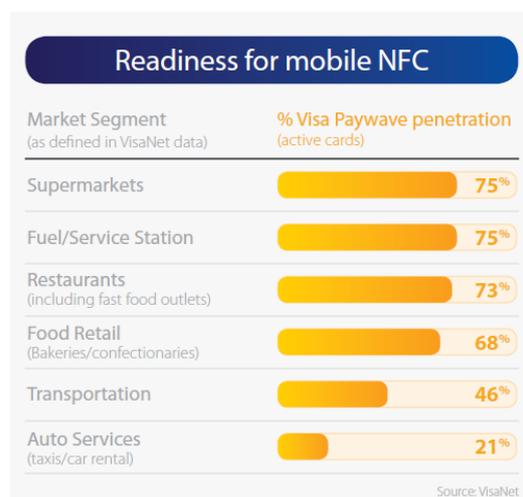
36. **Near-Field Communication (NFC)** technology is a set of technology standards and protocols for controller communications over a short distance, typically 4cm or less.³¹ NFC technology is already widely used to make contactless payments through payment cards in Australia, with Visa AP (Australia) Pty Ltd (**Visa**) estimating that there are 100,000 contactless terminals with merchants and over 1 million contactless transactions made per day.³²

37. The figure to the right shows the widespread availability of NFC terminals in Australia.³³

38. Digital wallets can use NFC technology to make mobile payments at NFC enabled point-of-sale terminals, by using either:

- a. the embedded NFC controller in a mobile device, or
- b. external NFC hardware.

39. Mobile devices embedded with an NFC controller were introduced with the release of the Nexus S running the Android platform in 2010 and the iPhone 6s, 6s Plus and SE running the iOS platform in September 2014.



40. **Quick Response Codes (QR Codes)** are a two-dimensional evolution of the traditional barcode which allows complex information to be encoded in visual form.³⁴ QR Codes may be displayed on a mobile phone screen and scanned by a QR Code-enabled point-of-sale terminal.

41. QR code payments are not as widely accepted by Australian merchants and consumers as NFC payments.³⁵ This differs from the situation in some overseas countries. Notably, in China, multi-issuer digital wallets using QR code technology include Alipay and WeChat Pay, both of which are popular in urban China where the use of QR codes at the point-of-sale is widespread.³⁶

42. Despite the prevalence of NFC-based payments in Australia, CBA has recently upgraded its fleet of 55,000 Albert point-of-sale terminals (see image below) to be able to accept QR-code based payments following an agreement between CBA and Alipay in

31 <http://nfc-forum.org/what-is-nfc/>.

32 'The prospects for mobile contactless payments in Australia', 16 April 2014: <http://blog.apca.com.au/prospects-mobile-contactless-payments-australia/>.

33 The Visa-RFi Group Australian Payments Report, 'The changing payments behaviour of Australian consumers and the impact on banking relationships', June 2015, page 31: <https://www.visa.com.au/content/dam/VCOM/regional/ap/australia/global-elements/Documents/research-and-trends-visa-rfi-australian-payments-report.pdf>.

34 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 17, footnote 39.

35 Applicants submission received 7 October 2016, page 21.

36 See, e.g., Mobile Business Insights, 'How QR code became popular among mobile users in China', 19 May 2016: <http://mobilebusinessinsights.com/2016/05/how-qr-code-became-popular-among-mobile-users-in-china/>.

October 2016.³⁷ In addition, Bendigo and Adelaide Bank has used QR codes to enable point-of-sale mobile payments through its digital wallet 'redy Shopping'.



43. Lastly, **Magnetic Secure Transmission (MST)** is a technology that emits a magnetic signal that allows MST-enabled Samsung phones to mimic the magnetic strip on a traditional payment card to make mobile payments through Samsung Pay at any terminal that reads magnetic stripe credit cards.³⁸
44. Other wireless technologies, such as Bluetooth and Wi-Fi, can also be used to allow communication between devices. These are not in common use for point-of-sale payments in Australia.

Key inputs for mobile payment services using NFC

45. There are a number of key inputs for NFC-enabled mobile payment services, including:
 - a. NFC-capable hardware, e.g. a mobile device with an embedded NFC controller or other external NFC hardware
 - b. operating system software to manage and operate the NFC hardware
 - c. mobile application software to perform the specific functions of the digital wallet, and
 - d. payment cards able to be provisioned on to the digital wallet.
46. There are differing levels of vertical integration between providers of digital wallets and mobile payment services. Of the suppliers of multi-issuer digital wallets, Apple has a significant degree of vertical integration, as a manufacturer of the device hardware, and the developer of both the operating system software and mobile application software.
 - a. Apple designs, manufactures and markets mobile communication and media devices, personal computers and portable digital music players, and sells a variety of related software, services, accessories, networking solutions and third party digital content and applications.
 - b. Apple is the world's largest publicly traded company by market capitalisation, with a market value of \$US533 billion at 2 February 2016.³⁹ Its 2015 revenues were \$US234 billion worldwide.⁴⁰ It has been considered the world's most valuable brand since 2012 with an estimated brand value of \$US143 billion.⁴¹
47. Issuers are vertically integrated as the developer of application software as well as the issuer of the payment cards to be provisioned on to the digital wallets.

37 See CBA website on 'Albert, the clever EFTPOS tablet that can enhance your business': <https://www.commbank.com.au/business/merchant-services/eftpos-options/in-store/albert.html>.

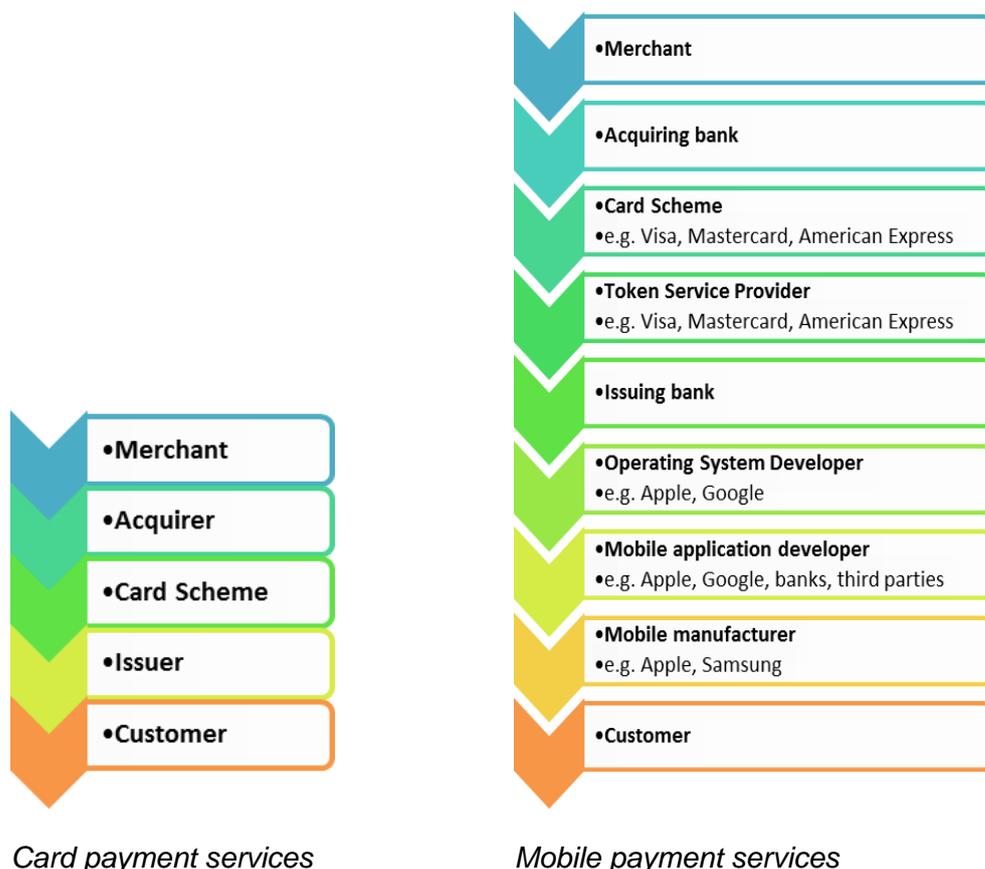
38 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 53.

39 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 41, citing the Financial Times Global 500, 2015.

40 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 42, citing Forbes, "The world's most valuable brands", 2015.

41 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 42, citing Forbes, "The world's most valuable brands", 2015.

48. Other relevant parties include card schemes such as Visa, MasterCard and Amex, who may have a role in ‘tokenisation’ of transactions and in distributing the interchange fee received by the issuer.
49. The numerous additional participants in the value chain for mobile payment services are contrasted with the participants in traditional card payment services below:

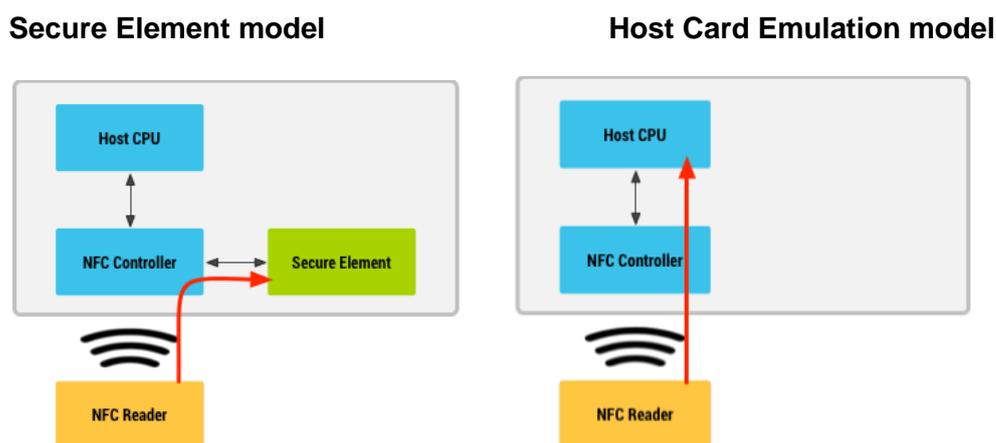


Security features of mobile payments using NFC

50. Mobile payment services are arguably more secure than card-based payments due to additional security features of digital wallets:
- a. **Tokenisation** is a process by which the actual credit card number is removed and replaced with a randomly generated number (the ‘token’) that is usually only valid within limited parameters.
 - i. For mobile payments made via NFC, a token is sent from the device to the merchant. The underlying credit card information of the cardholder is not transferred, which means this information will not be compromised if the merchant’s system is breached.
 - ii. Each of Visa, MasterCard and Amex supply tokenisation services to protect the credit card information of consumers making mobile payments.
 - b. **Biometric authentication** such as fingerprint identification, an eye scan or a heart rate sensor, is used in most smart mobile devices for authentication. This provides an additional layer of security for digital wallets. On iPhones, Apple Pay uses a Touch ID for consumers to unlock their phone and activate the

NFC-hardware to enable purchases through Apple Pay. Whilst fingerprint sensors are still vulnerable to forgery, it is considerably more costly to replicate a fingerprint than to forge a signature or catch sight of a PIN.⁴²

51. Whilst mobile payment services offered by each of Apple Pay, Android Pay and Samsung Pay all feature tokenisation and biometric recognition, they differ in whether they use hardware or software to perform the NFC payment:
 - a. Apple Pay uses hardware in the form of a **Secure Element** chip.⁴³ A Secure Element chip is built into a mobile device and is isolated from other hardware components with a restricted access interface and strong encryption. This chip also only stores a single customer's credentials and cryptographic information, which limits its value to prospective hackers.⁴⁴
 - b. Android Pay has previously also used a Secure Element, but has recently changed to using software in the form of **Host Card Emulation (HCE)** to perform an NFC payment.⁴⁵ HCE allows sensitive data to be stored in the cloud, or a database external to the device. This means that the device itself does not hold any sensitive information that could be stolen along with the device.⁴⁶ The Commbank App also uses HCE to perform NFC payments on Android devices.⁴⁷
52. The following simplified diagram shows the difference in the transmission of information with a Secure Element (via the Secure Element chip) and with HCE (directly between the reader and the host central processing unit).⁴⁸



42 'iPhone 6 fingerprint scanner found accurate enough for Apple Pay', 23 September 2014: <http://www.csoonline.com/article/2687372/data-protection/iphone-6-fingerprint-scanner-found-accurate-enough-for-apple-pay.html>.

43 Android Developers forum, 'Host-based Card Emulation': <https://developer.android.com/guide/topics/connectivity/nfc/hce.html>.

44 The Sequent Blog, 'Secure elements vs cloud-based HCE: What is more secure for NFC mobile payments?': <http://www.sequent.com/secure-elements-vs-cloud-based-hce-secure-nfc-mobile-payments/>.

45 Android Developers forum, 'Host-based Card Emulation': <https://developer.android.com/guide/topics/connectivity/nfc/hce.html>.

46 The Sequent Blog, 'Secure elements vs cloud-based HCE: What is more secure for NFC mobile payments?': <http://www.sequent.com/secure-elements-vs-cloud-based-hce-secure-nfc-mobile-payments/>.

47 Mobile & NFC Council Smart Card Alliance, 'Host Card Emulation (HCE)', 18 June 2015: http://www.smartcardalliance.org/downloads/HCE_Webinar_FINAL_061815.pdf.

48 Android Developers forum, 'Supported NFC Cards and Protocols': <https://developer.android.com/guide/topics/connectivity/nfc/hce.html#SupportedProtocols>.

Mobile payment devices

53. As mentioned, a key input for mobile payments is NFC-capable hardware, which may be in the form of:
 - a. a smartphone with an embedded NFC controller (e.g. iPhone 6S), or
 - b. external NFC hardware in either a separate device (e.g. a smart watch or fitness tracker) or on its own (e.g. an NFC paytag or NFC wristband).
54. Currently, the most common use of external NFC hardware for mobile payments in Australia is in NFC paytags such as those used by CBA and NAB, which have fairly limited functionality.
55. However, mobile payment services are a new technology characterised by rapid change and innovation, with new services and devices being announced on a regular basis. For instance, NFC mobile payments are being made available on a growing range of wearable devices, including smart watches, fitness trackers, NFC bands, smart cards, and other NFC-capable accessories.

Smartwatches

56. An increasing number of smartwatches will be able to make NFC mobile payments following the release of Google's Android Wear 2.0 operating system on 8 February 2017.
57. Two new smartwatches by LG were released along with the Android Wear 2.0 update, though the update is also compatible with a number of existing smartwatches from Asus, Casio, Fossil, Huawei, Moto 360, and others.⁴⁹
58. Android Wear watches can be used along with smartphones on either the Android or iOS platforms.

Fitness trackers

59. In the US, fitness tracker Jawbone UP4⁵⁰ also offers American Express cardholders the ability to make NFC mobile payments by tapping their wrist on the payment terminal. FitBit is reported to be releasing a fitness tracker with NFC contactless payment capability in 2017, after purchasing wearable payment technology from Coin in 2016.⁵¹ MasterCard has also announced that it will work with Coin in partnership to bring NFC payments to fitness trackers from Moov, Atlas Wearables, and Omate.⁵²

49 Whether existing smart watches upgraded with Android Wear 2.0 will have NFC payment functionality will depend on the hardware: Techcrunch, '*Here are the Android Wear watches that will get the 2.0 update*', 8 February 2017: <https://techcrunch.com/2017/02/08/android-wear-2-0-upgrade/>.

50 The Jawbone Blog, '*Now Shipping! Introducing UP4*', <https://jawbone.com/blog/introducing-up4/>.

51 See, e.g. Wareable, '*Fitbit NFC wearable payments are coming but not in 2016*', 18 May 2016: <https://www.wareable.com/fitbit/fitbit-nfc-wearable-payments>; Wareable, '*Fitbit smartwatch investigation: Fitbit is hell-bent on building an Apple Watch rival*', 17 February 2017: <https://www.wareable.com/fitbit/fitbit-smartwatch-details-2017>.

52 Wareable, '*MasterCard bringing wearable payments to fitness trackers including Moov*', 8 January 2016: <https://www.wareable.com/fitness-trackers/mastercard-and-coin-bringing-wearable-payments-to-fitness-trackers-including-moov-2147>.

60. In Singapore, commuters will soon be able to link certain fitness trackers or smartwatches to their EZ-Link transport card to pay for public transport.⁵³ Currently, two available fitness trackers have this function: the Garmin Vivosmart HR and the Batman v Superman fitness tracker by EZ-Link in collaboration with Watchdata Technologies.
61. Most fitness trackers are compatible with smartphones running either Android or iOS operating systems.

NFC bands

62. Westpac has announced that it will launch its own mobile payment device, initially available in a smart wristband later in 2017, which will contain a NFC chip that is linked to a nominated debit or credit card.⁵⁴
63. The Curl⁵⁵ is a wearable device recently released by Sydney start-up Inamo that contains a prepaid NFC chip and can clip on to a watch, fitness tracker, or jewellery. The Curl functions similarly to a prepaid card that can be topped up with money and managed through a mobile app or online account. In the next 18 months, Inamo plans to extend the Curl's functionality to include public transport, building access, gym membership, and festival tickets.⁵⁶
64. Cash by Optus is a 'closed-loop' payment system offered by Optus that uses underlying Visa payWave technology, an NFC sticker or an NFC wearable band, to charge contactless payments to an Optus Mobile Account.⁵⁷
65. Around February 2016, Fit Pay launched a kickstarter campaign to build Pagaré wrist straps that can be fitted on to smartwatches by Pebble to enable NFC payments.⁵⁸ Pebble was acquired by Fitbit in December 2016.⁵⁹
66. Topshop has also partnered with Barclays Bank to produce a range of accessories, including wristbands that can be fitted with a contactless payment chip to enable NFC mobile payments.⁶⁰ This collection of accessories from Topshop includes not only wristbands but also keyrings and phone cases.

53 NFC World, 'Singapore commuters to get NFC-enabled transport payment wearables', 19 January 2017: <https://www.nfcworld.com/2017/01/19/349561/singapore-commuters-get-nfc-enabled-transport-payment-wearables/>.

54 Australian Financial Review, 'Westpac raises tech stakes with wearables and social messaging payments', 20 March 2017: <http://www.afr.com/technology/apps/business/westpac-raises-tech-stakes-with-wearables-and-social-messaging-payments-20170315-guylwj>.

55 Inamo website, 'The Curl': <http://www.inamo.com/>.

56 Spring Wise, 'New device makes it possible to retrofit your watch with NFC payment functionality', 1 February 2017.

57 Finder.com.au, 'Optus adds NFC wearables to Cash By Optus', 8 February 2016: <https://www.finder.com.au/optus-adds-nfc-wearables-to-cash-by-optus>

58 CNet, 'This strap could let you pay the bill with your Pebble smartwatch': <https://www.cnet.com/au/news/pagare-pebble-time-smart-strap-nfc-payments-apple-pay/>

59 The Verge, 'Fitbit formally announces that it is buying smartwatch maker Pebble', 7 December 2016: <http://www.theverge.com/2016/12/7/13867158/fitbit-buys-pebble-smartwatch-acquisition-deal>.

60 Wareable, 'Cute as hell Topshop x bPay accessories take fashion tech payments mainstream', 11 November 2015: <https://www.wareable.com/fashion/cute-as-hell-topshop-x-bpay-accessories-payments-1931>.

Smart cards

67. More advanced hardware with NFC capability has also been deployed in new products such as smart cards, which are electronic payment devices that resemble a payment card.
68. These smart credit cards are equipped with in-built processors and other hardware that allows a consumer to perform a range of functions like store multiple credit, debit, gift, loyalty and membership cards, make point-of-sale payments, perform biometric identification, provide proximity alerts, etc. Some of these functions are often provided by smart cards through an accompanying smartphone app.
69. Examples of smart cards include:
 - a. **Plastc**, launched in April 2016, contains a magnetic stripe and an EMV chip, as well as NFC hardware to enable contactless payments. Plastc has a touch screen and requires a 4-digit PIN to be unlocked or for the user to switch cards. The Plastc smartphone app offers features such as 'left behind' alerts when the Plastc card is a certain distance away from your phone and a 'remote wipe' feature for erasing the stored information.⁶¹
 - b. **Coin 2.0** also uses both magnetic stripe technology and NFC technology to allow contactless payments at compatible terminals. Coin 2.0 replaces the NFC-incompatible Coin 1.0 launched in 2013.⁶² In May 2016 Coin announced the acquisition of its wearables payment platform by Fitbit.⁶³
 - c. **Swyp** has a magnetic stripe and an EMV chip, but no NFC technology. The Swyp app can also scan barcodes.⁶⁴
 - d. **Stratos Card**, launched in May 2015, uses the same magnetic stripe technology as traditional magnetic stripe cards with no NFC-capability.⁶⁵ It uses Bluetooth technology to communicate with the Stratos smartphone app. The Stratos Card was discontinued in December 2015.⁶⁶

Other NFC-capable accessories

70. There are also reports of a wide variety of other wearables being fitted with NFC payment capability. For instance, an increasing variety of smart jewellery is also entering the mobile payments market, including rings and bracelets from Motiv,⁶⁷ Ringly,⁶⁸ and Nimb.⁶⁹

61 Plastc website: <https://plastc.com/>.

62 Nerdwallet, '*Stratos, Coin, Plastc, Swyp: Sizing Up Multi-Account Cards*', 20 November 2015: <https://www.nerdwallet.com/blog/credit-cards/stratos-coin-plastc-swyp-sizing-multiaccount-cards/>

63 Coin Blog, '*Coin Wearable Payments Platform Acquired by Fitbit*', 18 May 2016: <http://blog.onlycoin.com/>

64 SWYP website: <https://www.swypcard.com/>.

65 Stratos website: '*Your Cards Connected. Stratos simplifies your wallet*': <https://stratoscard.com/>.

66 Techcrunch, '*Stratos Card To Shut Down Just Six Months After Launching*', 21 December 2015: <https://techcrunch.com/2015/12/21/stratos-card-to-shut-down-just-six-months-after-launching/>

67 Motiv website: <http://mymotiv.com/>.

68 Ringly website: <https://ringly.com/>.

69 Kickstarter, '*Nimb: A Smart Ring That Helps You Feel Safe and Sound*': <https://www.kickstarter.com/projects/1629204423/nimb-a-smart-ring-that-keeps-you-safe-and-sound>

71. Media reports also indicate that the NFC chip in Westpac's smart wristband will be available separately to the band and could be clipped on top of a watch strap or existing band like a Fitbit, or potentially attached to clothing, jewellery or other accessories.⁷⁰

Digital wallets

Meaning of 'digital wallet'

72. The Applicants have broadly defined a digital wallet as an app or service that facilitates mobile payments and may also store other cards such as loyalty cards, boarding passes, event tickets, coupons, and identification and membership cards.⁷¹
73. In this determination, where the term '**digital wallet**' is used, it refers to an app on a mobile device that performs some of the functions of a physical wallet, including storing payment cards for making mobile payments, making payments at the point-of-sale and, in some cases, storing other cards such as loyalty cards.
74. Additional functions of digital wallets may include holding airline or event tickets, loyalty cards, store value cards, coupons, transport cards, identification and membership cards, etc., depending on the availability of participating retailers or transport providers.
75. Examples of digital wallets include the Apple Wallet app, the Android Pay app, and issuer-branded apps such as the Commbank App and the Westpac Mobile Banking app. Apple Pay is not included in the ACCC's definition of a digital wallet but is instead considered to be a mobile payment service (as discussed above).
76. '**Multi-issuer digital wallets**' refer to digital wallets that are not offered by an issuer for that issuer's payment cards, but instead store cards from multiple issuers, e.g. Apple Wallet app, Android Pay app, Google Wallet app, etc. '**Issuer digital wallets**' refer to digital wallets offered by an issuer for that issuer's payment cards, e.g. Commbank app, ANZ Mobile Pay app, NAB Mobile Banking app.

Digital wallets in Australia

77. There are currently three multi-issuer digital wallets able to make NFC-enabled mobile payments in Australia:
- a. **Apple Wallet using Apple Pay** was developed by Apple for the iOS platform only and launched with American Express (**Amex**) in Australia in November 2015, with ANZ in April 2016, and has recently been made available on cards issued by some of Cuscal's members,⁷² as well as cards issued by ING Direct

70 Australian Financial Review, 'Westpac raises tech stakes with wearables and social messaging payments', 20 March 2017.

71 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 17.

72 Cuscal's 31 clients who made Apple Pay available to their cardholders on 15 November 2016 are: Bank Australia, Bank of Sydney, Beyond Bank Australia, Big Sky Building Society, Australian Unity, CAPE Credit Union, Central West Credit Union, Illawarra Credit Union, Catalyst Money, Community First Credit Union, Northern Beaches Credit Union, Credit Union Australia (CUA), Credit Union SA, Defence Bank, EECU, First Option Credit Union, Goldfields Money, Goulburn Murray Credit Union Co-Op, Holiday Coast Credit Union, Horizon Credit Union, Intech Credit Union, Laboratories Credit Union, My State Bank, The Rock, Northern Inland Credit Union, People's Choice Credit Union, Police Bank, Customs Bank, QT Mutual Bank, Select Encompass Credit Union, South West Slopes Credit Union, Sydney Credit Union, Teachers Mutual Bank, UniBank, The Mac (Macarthur Credit Union), Warwick Credit Union and Woolworths Employees' Credit

and Macquarie Bank. Apple Pay uses biometric authentication in the form of a fingerprint ID. Apple Pay also uses tokenisation and a dynamic cryptogram to generate single-use payment tokens transmitted to merchants instead of a user's real credit card number. Apple does not allow third party app developers to access the NFC controller on Apple devices, which means issuers cannot create their own apps that provide mobile payment services in competition with Apple Pay.

- b. **Android Pay** was developed by Google for the Android platform only and launched in Australia in July 2016 with support for cards issued by ANZ, Amex, Macquarie and a number of regional banks and credit unions. Access to the NFC controller on Android devices is provided by a documented Application Programming Interface (**API**). Android Pay requires the device to be unlocked before use, which can be done by a passcode, pattern or biometric authentication, depending on device capability and user preference. Android Pay uses tokenisation to create a virtual credit card number and keep actual card data hidden from merchants.
- c. **Samsung Pay** was developed by Samsung for the Android platform and for specific Samsung devices only. It launched in Australia in June 2016 for cards issued by Amex and Citibank. Access to the NFC controller on Samsung devices is provided by the standard Android API. Samsung Pay also uses a passcode or biometric authentication such as fingerprint ID or (in limited models) a retina scan. It uses tokenisation to ensure that credit card information is not stored on the device or sent to the merchant terminal.

78. At present, the Applicants are able to offer their own banking app on iOS alongside Apple Pay, but cannot access the NFC controller contained in Apple devices. They can only therefore offer contactless payments via their own apps by using an NFC paytag or by agreement with Apple on terms for use of Apple Pay in their app (with no such agreements currently existing in Australia between issuers and Apple).

79. The Applicants offer a combination of digital wallet and mobile banking services:⁷³

- a. **Bendigo and Adelaide Bank** offers a digital wallet and loyalty rewards using QR code technology at selected retailers for both iPhones and Android phones. Bendigo and Adelaide Bank also offers Android Pay to enable mobile payments using embedded NFC for Android devices.
- b. **Commonwealth Bank of Australia (CBA)** offers mobile banking and mobile payments through its CommBank app for smartphone. The CommBank app allows mobile payments to be made on NFC with the embedded NFC on compatible Android devices and via an NFC paytag for iPhone devices. CBA cardholders are not currently able to use Android Pay. CBA subsidiary BankWest does not offer its cardholders any BankWest-branded digital wallet but does offer mobile payment services through Android Pay.
- c. **National Australia Bank (NAB)** offers mobile banking and mobile payments on its NAB Pay app for both iOS and Android phones. NAB Pay allows mobile payments using NFC technology using the embedded NFC controller on Android phones and using an NFC paytag on iPhones. NAB cardholders are not currently able to use Android Pay.

Union. See press release, 'Cuscal enables clients to offer Apple Pay', 15 November 2016: <https://www.cuscalpayments.com.au/news/press-releases/cuscal-enables-clients-offer-apple-pay/>.

73 Applicants' submission in support of the applications for authorisation received 26 July 2016, pages 2-3.

- d. **Westpac Banking Corporation (Westpac)** offers mobile banking and payments through its Westpac Mobile Banking app, which enables mobile payments using the embedded NFC controller on compatible Samsung smartphones.⁷⁴ Westpac has announced that it will soon make its payment cards available on Android Pay.

Recent developments in digital wallets

80. Digital wallets are new to the payments landscape in Australia and globally and there is a high level of development with announcements of new offerings appearing frequently. Upcoming initiatives in Australia involving digital wallets include the following:
 - a. Transport for NSW has announced a trial of an 'open loop' alternative to the public transit smart card which would allow passengers to tap on and off with their credit or debit card or digital wallet.
 - b. The NSW government has announced a digital licence program that will see a number of common licences available in digital form and a digital driver's licence by 2018. These could potentially be held in apps or in a digital wallet.
 - c. The Commonwealth Government has begun to provide digital versions of concession cards such as Health Care Cards and Pensioner Concession Cards through its Centrelink Express Plus mobile app. These could potentially be held in a digital wallet.
81. A growing number of digital wallets are also being introduced overseas, e.g. in the US, the UK and Canada.⁷⁵
82. A growing number of digital wallet apps and features are also emerging in Australia:
 - a. **Stocard** is a mobile wallet app that allows users to store their loyalty cards in their smartphone. Stocard currently has around 12 million users (1.5 million in Australia) and links over 4,000 brands globally.⁷⁶ This year, Stocard expects to launch mobile payments within the Stocard app through integration with Apple Pay and potentially other mobile payment services.⁷⁷
 - b. **MasterCard Identity Check (or 'selfie pay')**⁷⁸ is a new method of biometric authentication developed by MasterCard that generates a string of encrypted numbers based on 72 points on the user's face that is then compared with the encrypted numbers held by MasterCard. Selfie Pay will be released in Australia along with a MasterCard digital wallet app and can be used to make online

74 See Westpac website, 'Mobile Banking - Supported devices and operating systems': <https://www.westpac.com.au/personal-banking/online-banking/support-faqs/supported-devices/>.

75 See Applicants' submission in support of the applications for authorisation received 26 July 2016, pages 51-56.

76 Mozo, 'Wallet packed with loyalty cards? Solve the problem with Stocard digital wallet', 3 February 2017. <https://mozo.com.au/debit-cards/articles/wallet-packed-with-loyalty-cards-solve-the-problem-with-stocard-digital-wallet>

77 The Australian, 'Investor loyalty on the cards for Stocard', 7 February 2017. <http://www.theaustralian.com.au/business/technology/investor-loyalty-on-the-cards-for-stocard/news-story/ec458adfcab94eb8711e6af02832b172?nk=221d1a58f0ba35cd6da7a3837a157cba-1490844263>

78 See, e.g., MasterCard newsroom, 'Replacing Passwords with Selfies': <http://newsroom.mastercard.com/videos/replacing-passwords-with-selfies/> and MasterCard press releases: 'Mastercard makes fingerprint and 'selfie' payment technology a reality', 4 October 2016: <http://newsroom.mastercard.com/eu/press-releases/mastercard-makes-fingerprint-and-selfie-payment-technology-a-reality/>.

payments through the MasterCard app. MasterCard will also offer an API that allows banks to build Selfie Pay features into their own apps.⁷⁹

- c. **Cuscal** offers a white-label mobile banking and payments app for smartphones running iOS or Android that includes a set of digital wallet functions including account balances, fingerprint login and contactless payments.⁸⁰ Both Android Pay and Apple Pay are integrated into Cuscal's app for card verification features, but the Cuscal app is not needed for eligible cardholders to use either Apple Pay or Android Pay.⁸¹

83. **Boon** is a mobile payment app for Android devices in Europe.⁸² It was recently announced that Boon's mobile payment service will be integrated within **mobile-pocket**,⁸³ an app for managing loyalty and rewards cards as well as coupons and vouchers, which can be redeemed by the user at the point-of-sale through barcodes. This is said to provide an 'all-in-one shopping experience' that allows users to call up their loyalty cards, redeem vouchers or make payments within the same app.⁸⁴

Substitutability of digital wallets

84. From a consumer's point of view, whether one digital wallet is a close substitute for another will depend on a number of factors.
 - a. For a consumer who has multiple payment cards from different issuers, it may be important to have a digital wallet that allows for the provision of all of these cards. For this type of consumer, digital wallets that only allow use of one bank card may not be good substitutes for multi-issuer digital wallets that offer a range of card options.
 - b. For a consumer with a single or predominant relationship with one bank, that issuer's digital wallet may be a good substitute for other multi-issuer wallets that offer use of the issuer's cards.
85. However, for most consumers, particularly those with a single relationship with one bank, substitutability between issuer digital wallets is likely to be limited (e.g. for a NAB cardholder, the CBA digital wallet is not likely to be very useful unless the customer is willing to switch banks, as discussed below).
86. Competition between digital wallets is also limited by two main barriers to switching:
 - a. **device compatibility**: a consumer's ability to access different digital wallets is limited by the software and hardware on their mobile device. For example, Apple Pay is available only on iPhones and Android Pay is available on devices running the Android operating system. Therefore, in many cases, for consumers to switch

79 Sydney Morning Herald, 'MasterCard 'Selfie Pay' coming to Australia in 2017', 3 February 2017: <http://www.smh.com.au/technology/gadgets-on-the-go/mastercard-selfie-pay-coming-to-australia-in-2017-20170131-gu2ggz.html>.

80 Cuscal Ltd, 'Mobile Banking & Payments App': <https://www.cuscalpayments.com.au/digital/mobile-banking-payments-app/>.

81 Cuscal Ltd, 'Mobile Payments': <https://www.cuscalpayments.com.au/digital/mobile-payments/>.

82 Boon is currently available in Germany, Austria, the Netherlands, Belgium, Ireland, Spain, the United Kingdom, France, and Switzerland. See boon website: <https://boonpayment.com/>.

83 See mobile-pocket website: 'All your loyalty cards in one App': <http://www.mobile-pocket.com/?lang=en>.

84 Yahoo Finance, 'An All-in-one Shopping Experience: Wirecard and bluesource Link Mobile Payments and Loyalty', 20 February 2017: <http://finance.yahoo.com/news/one-shopping-experience-wirecard-bluesource-063000510.html>.

between multi-issuer digital wallets (i.e., from Apple Pay to Android Pay) would also require them to switch mobile device. Consumers' willingness and ability to switch between different mobile devices is discussed in the following section on mobile operating systems.

- b. **participating issuers:** a consumer's willingness to switch between different digital wallets will also depend on whether they have a payment card that can be provisioned onto the digital wallet. Currently, Amex is the only issuer who allows their cards to be loaded on to each of Apple Pay, Samsung Pay and Android Pay, whilst ANZ allows its cards to be loaded on to Apple Pay and Android Pay.

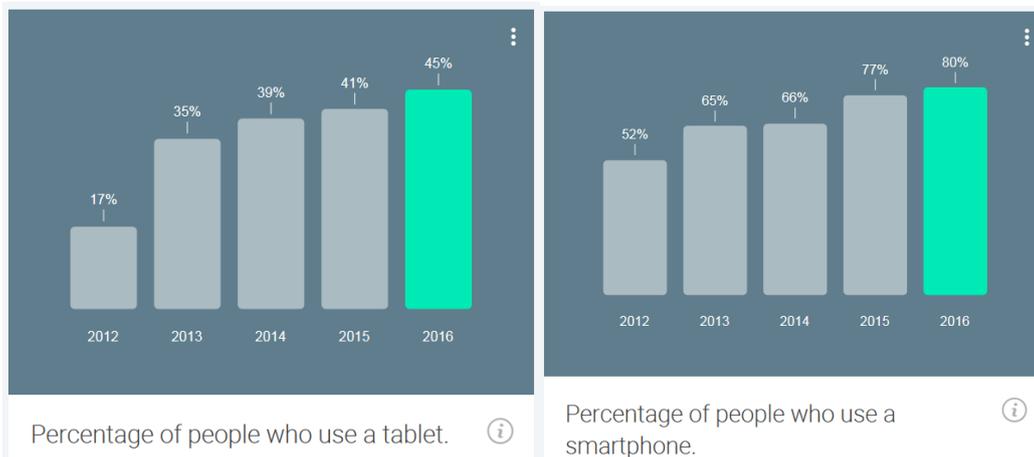
Mobile operating systems

Meaning of 'mobile operating systems'

- 87. Smart mobile devices are mobile devices such as mobile phones, tablets or watches that are equipped with a mobile operating system that is capable of running downloaded mobile applications such as digital wallets. There are two main mobile operating systems in Australia: Google's Android operating system and Apple's iOS operating system.

Key suppliers of mobile operating systems

- 88. Australia is characterised by widespread use of smartphones and increasingly widespread use of tablets. According to Google's Consumer Barometer, 80 per cent of Australians use a smartphone and 45 per cent use a tablet. Smart wearable devices such as smart watches or fitness trackers are now used by more than 2 million Australians.



- 89. Smartphones and other mobile devices are typically touchscreen devices running one of a number of operating systems, the most popular of which are:
 - a. **Android**, developed by Google and licensed free of charge to any manufacturer. The Google Play store sells Android apps. Android allows apps to be installed

from outside the Google Play store, including through app stores developed by device manufacturers. 52.6 per cent of handsets in Australia run on Android.⁸⁵

- b. **iOS**, developed by Apple and only available on Apple devices. Apple's App Store sells iOS apps. Apple's App Store is generally the only way to distribute and install apps on Apple devices. 41.2 per cent of smartphones in Australia are Apple devices.⁸⁶ Apple does not provide public API for access to the NFC controller.
- c. **Windows Phone**, developed by Microsoft and available primarily on its Microsoft Lumia handsets and licensed free of charge to other device manufacturers. Microsoft's Windows Phone Store sells Windows Phone apps. Windows Phone provides public APIs that facilitate access to the NFC controller. 5.4 per cent of handsets in Australia run on Windows Phone.⁸⁷

90. Apple and Google have different competitive strategies in relation to their mobile operating systems. Apple tightly integrates its hardware and software wishing to maintain control over how the consumer experiences its devices, the sale of which constitute the majority of Apple's revenue. In the third quarter of 2016, Apple reported revenue of \$24.05 billion from sale of iPhones alone, which represented 56.77 per cent of its total revenue for that quarter.⁸⁸

91. In contrast, Google's main revenue stream is advertising revenue. In the third quarter of 2015, Google's advertising revenues were around \$16.8 billion, approximately 89.84 per cent of its total revenue.⁸⁹ Google's advertising services are enhanced by Google's data collection through its various free services such as Google Maps, Gmail and Google Search. Google's open-source Android operating system is also provided for free, which has been a key factor in its rapid adoption by manufacturers.

Product differentiation

92. In respect of digital wallets on smartphones, Apple operates a different business model from its competitors, offering an integrated mobile device, operating system and digital wallet.

93. Consistent with this model, it has offered Apple Wallet as a preinstalled app on iPhones. In contrast, Android Pay is offered by Google on Android devices as an open-source platform in line with Google's general approach to software.

Dynamic nature of platform competition

94. As software platforms, both Apple's iOS operating system and Google's Android operating system are driven by the goal of attracting more users, developers and (for

85 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 18, citing Kantar WorldPanel data for the three months to January 2016.

86 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 18, citing Kantar WorldPanel data for the three months to January 2016.

87 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 18, citing Kantar WorldPanel data for the three months to January 2016.

88 Apple Inc. Q3 2016 Unaudited Summary Data: <http://images.apple.com/newsroom/pdfs/q3fy16datasum.pdf>.

89 Marketing Land, 'Alphabet (Google) Q3 Beats With \$18.7 Billion, Mobile Search Revenues "Strong"', 22 October 2015: <http://marketingland.com/alphabet-google-q3-beats-with-18-7-billion-mobile-search-revenues-strong-148303>.

Android) handset manufacturers.⁹⁰ There is often strong competition for market share, which tends to be fluid and subject to rapid change.⁹¹

95. Despite Apple and Google currently holding strong global positions in the market for mobile operating systems, it is a highly dynamic market marked by the frequent emergence of new players and rapid shifts in market share.⁹² As an example, the Android operating system in 2012 had a global market share of around 40 per cent.⁹³ By October 2016, Android is estimated to have a record 88 per cent global market share.⁹⁴
96. In addition, developments in other dynamic and high-technology markets, such as the smartphone manufacturing or mobile application development, may also impact competition between mobile operating systems. For instance, the highly-publicised recalls of Samsung's Galaxy Note 7 in September and again in October 2016 occurred shortly before the release of Apple's iPhone 7 and 7 Plus and may allow the iOS operating system to gain some market share over Android.⁹⁵
97. The dynamic nature of the market may be partly attributed to the rapid pace of technological advances leading to relatively short product life cycles for smartphones: for instance, the average user in some OECD countries switch smartphones more often than once every two years.⁹⁶

Consumer stickiness to operating systems

98. Consumers face significant costs in switching operating systems. As Apple does not licence its operating system to other manufacturers, switching between the iOS and the Android platforms requires a user to change smartphones.
99. Consumers may also face substantial sunk costs in paid software or digital content (e.g. movies, music) that is tied to a particular platform.⁹⁷ However, switching may be becoming easier over time.⁹⁸

Market concentration

100. Apple both manufactures the hardware and develops the iOS operating system for its iPhones and Apple Watches. In contrast, Google is a software developer and provides

90 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, page 17.

91 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, page 18.

92 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, pages 20-21.

93 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, page 19.

94 Business Wire, 'Strategy Analytics: Android Captures Record 88 Percent Share of Global Smartphone Shipments in Q3 2016', 2 November 2016.

95 EFT Daily News, 'Samsung's Debacle Could Turn the Tide for Apple's Smartphone Market Share', 16 October 2016, <http://etfdailynews.com/2016/10/16/samsungs-debacle-could-turn-the-tide-for-apples-smartphone-market-share/>.

96 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, page 20.

97 Organisation for Economic Co-operation and Development, Working Party on the Information Economy: The App Economy, 17 December 2013, pages 35-36.

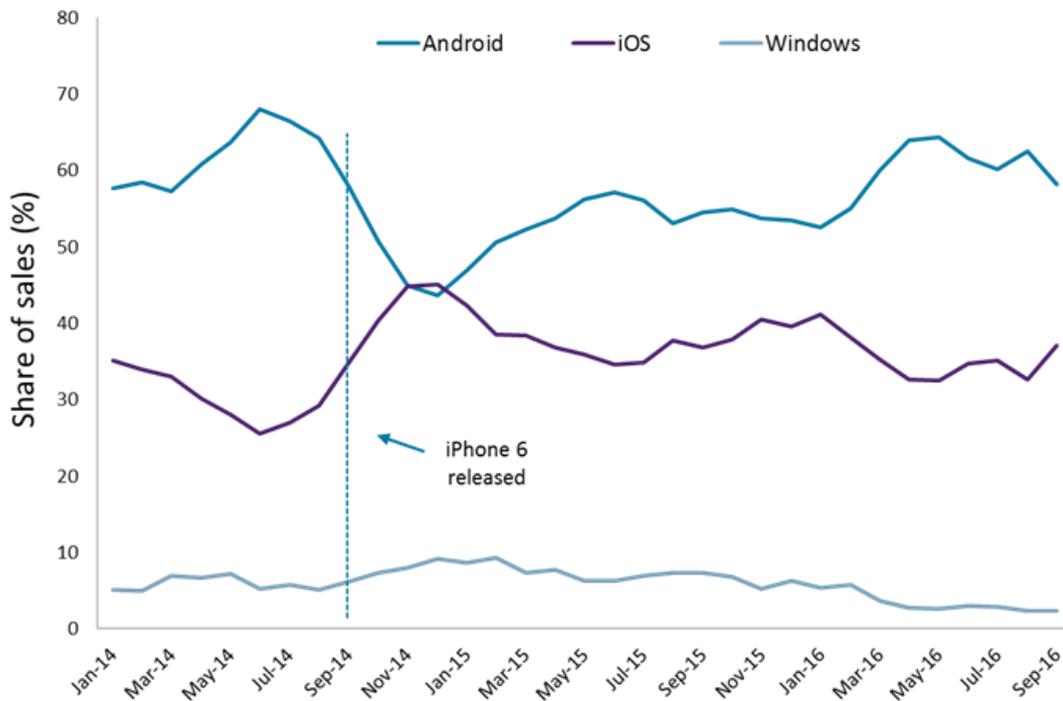
98 See, for example, <http://www.digitaltrends.com/mobile/how-to-switch-from-iphone-to-android/>

the Android operating system for devices manufactured by third parties, such as Samsung, HTC, Huawei and Sony.

101. The Applicants submit that Apple currently has the largest share of smartphones sales in Australia (41.2 per cent), followed by Samsung (30 per cent), which mostly run on Android.⁹⁹

102. Another source describes Apple’s Australian market share by number of units sold as slightly lower, at 35.3 per cent.¹⁰⁰ In either case, it appears that the market for smartphones is dynamic and characterised by frequent and rapid changes in market shares. Other mobile devices include Sony, HTC, Blackberry, Motorola and Huawei.

103. Of the major mobile operating systems (iOS, Android and Windows Phone), Australian sales of smartphones show that, since January 2014, 56.8 per cent of phones sold use Android, 35.8 per cent use iOS, and 5.9 per cent use Windows Phone (see chart below).¹⁰¹



104. The ACCC further notes research from Telsyte from March 2016 showing that around half of iPhone users have yet to upgrade to NFC-enabled iPhone models.¹⁰² Accordingly, the share of Australian consumers able to use Apple Pay at present may be only around half of Australian iPhone users.

99 Applicants’ submission: “Kantar OS stats: Apple leads as top brand in US, China but Android grows in US, Europe”, IT Wire, 27 January 2016.
 100 Australian Financial Review, ‘Mobile phone market share: Huawei nabs third spot as Google puts choke on Apple’, 12 May 2016.
 101 Sales since the three months ending January 2014, using sales data from Kantar WorldPanel, <http://www.kantarworldpanel.com/global/smartphone-os-market-share/> (sample: January 2014-September 2016).
 102 <http://www.afr.com/business/banking-and-finance/anz-apple-pay-users-hit-250000-20160829-gr3p0e>, citing Telsyte research. See also <https://www.telsyte.com.au/announcements/2016/3/15/lwyakigaympj35g2khr66j9lw15rr1>.

Payment card services

Card issuers and acquirers

The Applicants and other potential Group Participants

105. The applications are made on behalf of the Applicants and other potential Group Participants, which includes other issuers of payment cards in Australia.
106. The Applicants are large Australian retail banks offering a range of financial services and CBA, Westpac and NAB represent the first, second and fourth largest banks in Australia by profit (see table at paragraph 125). One of these financial services is to issue credit and debit cards to customers, which can be loaded onto digital wallets on smartphones and other devices (e.g. certain watches) that allow the customer to make mobile payments from their devices instead of using their payment card.
107. The Applicants together account for 66 per cent of the issued and available credit in Australia, 67 per cent of total household lending, and 70 per cent of total household deposits.¹⁰³ CBA recently announced yearly profits of \$9.5 billion, NAB reported half year profits of \$3.3 billion and Westpac reported half-year profits of \$3.9 billion (as at May 2016).¹⁰⁴
108. Other issuers of debit and credit cards that may be invited to join the group include banks that issue cards in Australia or retailers that issue cards. This would further increase the size of the bargaining group.

Non-participating issuers already signed up to Apple Pay

109. Issuers who are already signed up to Apple Pay are not likely to join the collective bargaining and collective boycott group. Non-participating issuers include ANZ, Amex, a number of smaller financial institutions represented by Cuscal Ltd, ING Direct and Macquarie Bank.
110. Amex was the first to sign up to Apple Pay in Australia in November 2015, allowing cardholders to load cards directly issued by Amex onto their Apple Wallet apps. This excluded Amex companion cards that are linked with Visa or MasterCard. Amex also issues a number of credit cards co-branded with David Jones or linked with Qantas or Virgin rewards programs.¹⁰⁵
111. ANZ was the first Australian bank to sign up to Apple Pay in April 2016. In August 2016, ANZ announced that around 20 per cent of its eligible base of Apple Pay cardholders have loaded their cards onto Apple Pay.¹⁰⁶
112. On 15 November 2016, Cuscal Ltd announced that Apple Pay will be enabled for 31 of its clients, who are smaller banks and credit unions.¹⁰⁷

103 Submission from Apple Pty Ltd, received 26 August 2016, section 4.5, citing APRA Monthly Banking Statistics, June 2016, reissued 10 August 2016.

104 Submission from Apple Pty Ltd, received 26 August 2016, section 4.5.

105 See <https://www.americanexpress.com/au/content/all-cards/>.

106 Australian Financial Review, 'ANZ Apple Pay users hit 250,000', 30 August 2016.

113. From 21 February 2017, ING Direct and Macquarie Bank have also made Apple Pay available for their cardholders using iPhones. At the date of this decision, Apple lists 49 issuers who support Apple Pay in Australia.¹⁰⁸

Multi-homing of payment cards

114. Australians hold an average of 2.18 credit cards each,¹⁰⁹ which suggests that many cardholders are likely to hold cards from more than one financial institution.

115. For these cardholders, multi-issuer digital wallets may be a better substitute for a physical wallet than issuer digital wallets, because multi-issuer digital wallets such as Apple Wallet and Android Pay support the ability for users to hold cards from multiple issuers.

116. In contrast, issuer digital wallets tend to be limited to cards issued by that issuer. For instance, the digital wallets offered by each of CBA, NAB and Westpac on Android devices do not allow users to upload cards from other financial institutions.

Substitutability of payment cards

117. The credit card issuers compete on a number of dimensions including interest rates, interest-free periods, fees and rewards. Consumers may have cards with just one provider or may hold cards with multiple issuers and so may switch between providers (full switching) or choose between their existing cards (multi-banking).

118. Multi-issuer digital wallets may facilitate greater competition between payment cards. For example, multi-issuer digital wallets may make it easier to 'carry' multiple cards and switch between them. Similarly, the digital wallets provided by card issuers may be a factor in consumer decisions on which payment card(s) to acquire.

119. Historically, consumers have faced high switching costs in the market for deposit accounts.¹¹⁰ Better access to information on financial products and services via the internet has significantly increased the ease of switching in recent years,¹¹¹ though the practical costs and inconvenience associated with switching payment cards would vary widely between different consumers.

120. For instance, consumers who have loan accounts bundled with transaction accounts, or consumers who have many direct debits and credits linked to an account, would be considerably more 'sticky' to their issuer than consumers who do not.¹¹²

121. In 2014, Roy Morgan Research estimated that 3.2 per cent of consumers switch their main financial institution each year.¹¹³

107 The full list is available at: <https://www.cuscal.com.au/apple-pay-coming-soon>.

108 <https://support.apple.com/en-au/HT206638>.

109 As of June 2015, derived from data from ASIC and the RBA: <http://www.creditcardfinder.com.au/credit-card-statistics>.

110 Sharpe SA, 'The Effect of Consumer Switching Costs on Prices: A Theory and Its Application to the Bank Deposit Market', Review of Industrial Organization, 12(1) 1997, pages 79-94 and Zephirin MG, 'Switching Costs in the Deposit Market', The Economic Journal, 104(423) 1994, pp 455-461.

111 Reserve Bank of Australia, RBA submission to the inquiry into Competition in the Banking and Non-Banking Sectors, 2008, page 17.

112 Reserve Bank of Australia, RBA submission to the inquiry into Competition in the Banking and Non-Banking Sectors, 2008, page 17.

Market concentration

122. The personal credit card industry in Australia represents an estimated total credit card liability of \$41.129b as at June 2016.¹¹⁴ The Applicants account for approximately 66 per cent of this total. The credit card issuance industry has estimated revenue of \$11.0b and profit of \$827.1m in 2016-17.¹¹⁵

123. In Australia, credit cards may be issued by Authorised Deposit-taking Institutions (**ADIs**) such as the Applicant banks and also, since 2004, a new class of ADIs, Specialist Credit Card Institutions. There are currently around 30 major credit card issuers in Australia, with a large number of smaller players.¹¹⁶ The four Applicant banks are card issuers. Apple does not issue cards.

124. As shown in the table below, four major banks account for a significant share of Australian commercial banking and the credit card industry, with a combined profit of over \$30b in 2015 and 84 per cent of credit card liability. Over the past two decades, the level of concentration in the commercial banks industry has increased, with several major mergers and acquisitions being undertaken by large banking corporations, such as Westpac and Bank of Melbourne in 1997; Westpac and St George Bank in 2008; ANZ and National Bank of New Zealand in 2003; and the Commonwealth Bank of Australia's and Bankwest in 2008.¹¹⁷

125. The Applicants make up around 65 per cent of the total credit card liability in Australia.

| | Gross credit card liabilities¹¹⁸ | Share of gross credit card liabilities¹¹⁹ | Statutory profit 2015 |
|----------------|--|---|--------------------------------|
| CBA | \$11,265 million | 27.4% | \$9,063 million ¹²⁰ |
| Westpac | \$9,622 million | 23.4% | \$8,012 million ¹²¹ |

113 Roy Morgan Research 2014, data provided to the Financial System Inquiry, viewed at http://fsi.gov.au/publications/interim-report/02-competition/banking-sector/#P207_37245. Note: the statistic refers to the Australian population aged 18 years and over that switched their main financial institution in the 12 months before April 2014.

114 Australian Prudential Regulation Authority, Monthly Banking Statistics, July 2016 (issued 31 August 2016), Table 2: Loans and advances on Australian books of individual banks, page 11, Table 2: Loans and advances on Australian books of individual banks.

115 IBISWorld Industry Report X0009, Credit Card Issuance in Australia, July 2016, page 3. The industry issues credit cards (e.g. Visa and MasterCard cards) and charge cards (e.g. American Express cards) to businesses and consumers. These cards provide users with a line of credit to use for purchases or cash advances. These statistics do not include debit cards.

116 Asia-Pacific Banking & Finance, 'Coles, CBA corner credit card competition', 1 May 2014, <http://www.australianbankingfinance.com/banking/coles--cba-corner-credit-card-competition/>

117 IBISWorld Industry Report K6221a, National and Regional Commercial Banks in Australia, September 2016 page 19.

118 Australian Prudential Regulation Authority, Monthly Banking Statistics, July 2016 (issued 31 August 2016), Table 2: Loans and advances on Australian books of individual banks, pages 8-11.

119 Australian Prudential Regulation Authority, Monthly Banking Statistics, July 2016 (issued 31 August 2016), Table 2: Loans and advances on Australian books of individual banks, pages 8-11.

120 Commonwealth Bank of Australia, 2015 Annual Report.

121 Westpac Group, 2015 Annual Report.

| | Gross credit card liabilities ¹¹⁸ | Share of gross credit card liabilities ¹¹⁹ | Statutory profit 2015 |
|----------------------------------|--|---|--|
| ANZ | \$8,022 million | 19.5% | \$7,216 million ¹²² |
| NAB | \$5,767 million | 14.0% | \$6,338 million ¹²³ |
| Citigroup Pty Limited | \$4,017 million | 9.8% | \$17,200 million (globally) ¹²⁴ |
| Bendigo and Adelaide Bank | \$3,17 million | 0.7% | \$423.9 million ¹²⁵ |

Consultation

126. The ACCC tests the claims made by an applicant in support of its application for authorisation through an open and transparent public consultation process.

127. The ACCC invited submissions from a range of potentially interested parties including major competitors, suppliers, customers, relevant industry associations or peak bodies, consumer groups, government departments and relevant regulatory bodies.¹²⁶

128. Before the draft determination, the ACCC received public submissions from 32 interested parties¹²⁷ regarding the applications for substantive and interim authorisation. These consisted of:

- a. ten interested parties supporting the applications from payments industry participants (such as Heritage Bank, Coles Supermarkets Pty Ltd (**Coles**), Australian Settlements Ltd) and industry bodies (such as APCA, the Australian Retailers Association and FinTech)
- b. 17 interested parties opposing the applications, including Apple, the South Australian Small Business Commissioner, and nine from individual consumers
- c. five interested parties not expressing a view but providing general comments regarding the scope of the applications, received from Google, PayPal, Visa, MasterCard and eftpos Payments Australia Ltd (**eftpos**). These parties generally support open access to mobile payment services.

122 Australia and New Zealand Banking Group Ltd, 2015 Annual Report.

123 National Australia Bank, 2015 Annual Financial Report, page 5.

124 Citigroup 2015 Annual Report.

125 Bendigo and Adelaide Bank, 2015 Annual Report.

126 A list of the parties consulted and the public submissions received is available from the ACCC's public register.

127 <http://registers.accc.gov.au/content/index.phtml/itemId/1197444/fromItemId/278039/display/submission>.

129. After the draft determination, the ACCC received 11 additional public submissions from eight interested parties responding to the ACCC's views in the draft determination, including:
- a. six interested parties opposing authorisation, including Apple and five individual consumers
 - b. two interested parties supporting authorisation from the Australian Retailers Association and Tyro Payments Ltd.
130. The views expressed in the submissions by the Applicants and interested parties are considered as part of the ACCC's assessment of the applications for authorisation. These views are considered by issue below.

Submissions on the likely future with and without

Future without

131. Interested parties share the general view that, in the likely future *without* the proposed conduct, many issuers will eventually offer Apple Pay to their cardholders in Australia on Apple's terms.
132. The Applicants describe the future without as one in which Australian issuers eventually agree on Apple Pay terms that do not allow for the Applicants to directly access the in-device NFC controller in iPhones to offer their own issuer digital wallets on the iOS platform.¹²⁸
133. Heritage Bank agrees with this view, submitting that it would be forced to offer Apple Pay to remain competitive with other issuers, irrespective of the cost of doing so.¹²⁹
134. Apple submits that, absent the collective bargaining and boycott, Apple is likely to reach agreement with some individual banks, expanding the reach of Apple Pay to a greater number of cardholders in Australia.¹³⁰ Apple further argues that the expansion of Apple Pay is likely to increase competition between payment cards at the point-of-sale, due to the ease with which customers can switch between cards from different issuers within the Apple Wallet app.¹³¹

Future with

135. In the future *with* the proposed conduct, the Applicants and other group participants will negotiate collectively with Apple regarding NFC access and App Store access and will engage in a limited collective boycott of Apple Pay for the duration of the collective bargaining, which may continue for up to 18 months following the date of authorisation.
136. The Applicants outline a number of possible outcomes of collective bargaining, noting that ultimately it is likely that some agreement will be reached between the Applicants and Apple, either collectively or individually.¹³²

128 CRA report supporting Applicants' submissions, received 26 July 2016, page 21. Applicants' submission received 26 July 2016, page 30.

129 Heritage Bank's submission received 18 August 2015, page 3.

130 Apple's submission received 26 August 2016, section 2.2, page 7.

131 Apple submission 31 January 2017, p5.

132 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 30.

137. Apple states repeatedly that the grant of authorisation will not lead to any change in Apple's global stance on the issue of NFC access and submits that the true outcome of authorisation will be to delay the expansion of Apple Pay to the 65 per cent of Australian cardholders represented by the Applicants.¹³³

Submissions on addressing the bargaining power imbalance

138. The Applicants argue that the Authorisation is needed to reduce the bargaining power disparity between Apple and the Applicants in Apple Pay bargaining and result in public benefits that derive from the Applicants' objectives of NFC access.¹³⁴

139. The Applicants submit that there is a strong disparity in the bargaining position of Apple as compared with the individual Applicants, which is supported by Apple's submission regarding its bargaining in which it makes clear that any adoption of Apple Wallet in Australia will be on Apple's terms.¹³⁵ The Applicants argue that:¹³⁶

- a. Apple controls the operating system, the mobile hardware and the software that can be placed on the iPhone and ultimately controls access to iPhone customers
- b. increasing consumer appetite to use their mobile phones to make payments requires that the banks provide mobile payment services or risk losing their customers
- c. for as long as Apple restricts access to the iPhone's NFC functionality, Apple Pay will be the only mobile payment service for iPhone users wanting to use their phones to make contactless payments
- d. iPhone customers in particular value the ability to make mobile payments and also represent significant value to issuers, which means that in individual negotiations the banks will have no choice but to provide Apple Wallet on Apple's own terms in order to satisfy customer demand for mobile payment services.

140. The Applicants also argue that if they do not have direct access to the NFC controller on iPhones, they will lose some customers rather than the customer switching to an Android device to access the Applicant's digital wallet, because:

- a. there are substantial switching costs between mobile devices such that individual app developers have a negligible impact on the market share of iPhones in a relevant time frame,¹³⁷ and
- b. because Apple Pay is available on iPhones, it provides a substitute to any digital wallets provided by the Applicants.¹³⁸

141. The Applicants therefore submit that have little power in individual negotiations and 'have no choice but to provide Apple Pay on Apple's own terms in order to satisfy customer demand for mobile payment solutions'.¹³⁹

142. The Applicants argue that a flow-on effect from the claimed competitive bottleneck is that the Applicants face a 'prisoner's dilemma' problem, in that all of the Applicants would benefit if they collectively resisted agreeing to restricted NFC access, but that

133 Apple's submission received 26 August 2016, pages 3-4, section 1; Apple's submission received 26 October 2016, page 1; Apple's submission received 31 January 2017, page 3.

134 Applicants' submission received 7 October 2016, pages 9-19.

135 Applicants' submission received 7 October 2016, page 9.

136 Applicants' submission received 7 October 2016, page 11.

137 Dr Susan Athey report supporting Applicants' submission received 7 October 2016, pages 12-13.

138 Dr Susan Athey report supporting Applicants' submission received 7 October 2016, page 13.

139 Applicants' submission received 7 October 2016, page 11.

each Applicant individually has the incentive to accept the NFC access restriction in order to avoid the competitive disadvantage of not being able to offer iPhone users the ability to use Apple Pay when other issuers can.¹⁴⁰

143. Therefore, the Applicants argue that the cost to Apple of not reaching an agreement with an individual Applicant is small, as they are 'limited to the failure to generate revenues from Apple Pay in relation to the cards of that issuer', while the gain from maintaining Apple Pay as the sole digital wallet with embedded NFC access on iPhones is large.¹⁴¹ They argue that, as a result, Apple's negotiation position is likely to prevail even though Apple needs agreements with issuers for Apple Pay to be a success.¹⁴²
144. The Applicants consider that the proposed collective bargaining and associated boycott would solve the prisoner's dilemma problem because 'the absence of most of the major banks from Apple Pay in Australia is a noticeable distinction between the Apple and Android platforms and, as mobile payments increase in popularity, could have an increasing impact on Apple's bottom line', thereby improving the Applicants' bargaining position.¹⁴³
145. The Applicants submit that, once a critical mass of issuers have individually signed up to Apple's terms, there may not be a comparable opportunity to achieve a better outcome in negotiations and the associated competition and consumer choice benefits.¹⁴⁴
146. The Applicants submit that, if authorisation is granted, there is a real likelihood that 'significantly improved positions' in relation to the relevant issues will be negotiated¹⁴⁵ (the Applicants point to negotiations overseas which have resulted in Apple offering modified terms).¹⁴⁶
147. Heritage Bank and Tyro Payments submit that the proposed conduct will increase issuers' bargaining power in negotiations with Apple and improve their input into contracts:
- a. Heritage Bank submits that there are no issuers in the Australian market that can match Apple's size or revenue and that Apple has demonstrated an apparently high degree of bargaining power in overseas negotiations.¹⁴⁷ Heritage Bank also argues that, even if the collective bargaining does not change the status quo, it will provide a level playing field for all participants in negotiations with Apple.¹⁴⁸
 - b. Tyro Payments submits that collective bargaining would bolster the currently weak negotiating position of the Australian banks and prevent Apple from applying a 'divide and conquer' strategy,¹⁴⁹ but also notes that it seems

140 Applicants' submission in support of the applications for authorisation received 26 July 2016, the attached Expert Report of Charles River Associates, pages 12-20.

141 Applicants' submission in support of the applications for authorisation received 26 July 2016, the attached Expert Report of Charles River Associates, page 19.

142 Applicants' submission in support of the applications for authorisation received 26 July 2016, the attached Expert Report of Charles River Associates, page 21.

143 Applicants' submission received 7 October 2016, the attached Expert Report of Dr Susan Athey, page 14.

144 Applicants' submission received 11 November 2016, page 27.

145 Applicants' submission received 7 October 2016, page 9.

146 Applicants' submission received 7 October 2016, pages 14-16.

147 Heritage Bank's submission received 18 August 2016, page 5.

148 Heritage Bank's submission received 18 August 2016, page 3.

149 Tyro Payments' submission received 4 August 2016, page 2.

counterintuitive to grant an exemption from competition rules to ‘the local bank oligopoly’.¹⁵⁰

148. After the draft decision, Tyro Payments made a further submission reiterating its view that Apple’s global market power in mobile payment services is almost unbridled against smaller issuers.¹⁵¹
149. Apple’s response is that, individually, each of the Applicants exerts greater bargaining power ‘in the relevant market’ than Apple.¹⁵² Apple claims that the Applicants have substantial bargaining power by controlling access to their cardholder customers, who are ‘a necessary input that Apple needs in order to offer Apple Pay to customers’.¹⁵³
150. Apple also submits that sales of NFC capable smartphones fluctuate significantly due to vigorous competition between smartphones.¹⁵⁴ Apple rejects that it is free-riding off long-standing installed NFC infrastructure and submits that the Applicants in fact wish to free-ride off its investment in the Apple Pay service.¹⁵⁵
151. The South Australian Small Business Commissioner also submits that the Applicants have ‘a significant level of market power in their own right’.¹⁵⁶

Submissions on public benefits

152. The Applicants submit that public benefits arising from NFC access and App Store access include greater competition in mobile payment services, increased consumer choice of digital wallets, greater incentives for innovation (on both Android and iOS) and more efficient utilisation of existing NFC infrastructure from greater adoption of mobile payment services.¹⁵⁷
153. Apple submits that the grant of authorisation will not change Apple’s stance regarding NFC access and therefore cannot lead to any of these public benefits.¹⁵⁸ Apple also submits that, even if Apple were to agree to NFC access, the Applicants have not provided reliable evidence to support their claimed public benefits to the required statutory standard.¹⁵⁹

NFC access

Increased competition in mobile payment services

154. The Applicants submit that if collective negotiations are successful, issuers will have the option of offering their own digital wallets with embedded NFC on Apple devices

150 Tyro Payments’ submission received 4 August 2016, page 3.

151 Tyro Payments’ submission received 31 January 2017, page 2.

152 Apple’s submission received 26 August 2016, page 19, section 4.7 (emphasis in original).

153 Apple’s submission received 26 August 2016, page 17, section 4.6.

154 Apple’s submission received 26 October 2016, page 9.

155 Apple’s submission received 26 October 2016, page 9.

156 South Australian Small Business Commissioner’s submission received 9 August 2016, page 7.

157 E.g. Applicants’ submission in support of application, received 26 July 2016, pages 31-36.

158 Apple’s submission received 26 August 2016, pages 3-4, section 1; Apple’s submission received 26 October 2016, page 1; Apple’s submission received 31 January 2017, page 3.

159 Apple’s submission received 26 August 2016, page 4 and Apple’s submission received 31 Jan 2017, page 3.

alongside Apple Pay.¹⁶⁰ If collective negotiations are partially successful, Apple may be persuaded to some 'relaxation of exclusivity', such as agreeing that the exclusivity be limited to other multi-issuer wallet providers.¹⁶¹

155. The Applicants submit that NFC access on iPhones will allow effective competition in mobile payment services, because:

- a. Issuers cannot currently compete with Apple in mobile payment services because of the limitations on existing opportunities to compete: NFC paytags offer little more functionality than payment cards themselves;¹⁶² and 'the size of the addressable market for Android customers is simply not big enough to justify the investment in new technology'.¹⁶³
- b. Competition between mobile payment services on Apple devices will increase pressure on Apple to provide competitive pricing and to continuously innovate for the benefit of Australian consumers.¹⁶⁴ The Applicants also note that only Apple can currently determine what additional features are added to Apple Pay and set the price-quality outcomes.¹⁶⁵
- c. The Applicants do not consider that competition between iOS and Android operating systems provide sufficient competitive constraint on Apple.¹⁶⁶

156. The following interested parties agree that NFC access is likely to increase competition in mobile payment services:

- a. APCA submits that open access would enhance payment innovation and consumer choice, which delivers tangible benefits to consumers and merchants.¹⁶⁷
- b. The Australian Retailers Association (the **ARA**) notes that NFC technology 'has already been installed by most retailers as part of the rollout of contactless card payments such as PayWave and PayPass' in Australia.¹⁶⁸ Open access would allow for increased competition amongst mobile technologies leading to greater innovation and investment, more consumer choice and increased participation.¹⁶⁹
- c. After the draft decision, the ARA made a further submission noting that this is an important time in the development of digital wallets and mobile payment services.¹⁷⁰ There is an opportunity for rapid innovation and new players, platforms and services to emerge in a quickly developing market, which may be lost if a new service is not able to access all the major mobile platforms.¹⁷¹ The ARA reiterates that Australian banks and merchants have invested in the widespread deployment of NFC terminals and associated software, which has led to rapid adoption of contactless card payments in Australia, and lack of NFC

160 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 30.

161 Applicants' letter to the ACCC responding to request for further information, 30 September 2016, response to Question 7.

162 Applicants' submission received 9 February 2017, pages 26-27.

163 Applicants' submission received 21 November 2016, page 6.

164 Applicants' submission received 9 February 2017, page 22.

165 Applicants' submission received 11 November 2016, page 2.

166 Applicants' submission received 11 November 2016, page 2.

167 Australian Payments Clearing Association's submission received 18 August 2016, page 2.

168 Australian Retailers Association's submission received 18 August 2016, page 1.

169 Australian Retailers Association's submission received 18 August 2016, page 2.

170 Australian Retailers Association's submission received 31 January 2017, page 2.

171 Australian Retailers Association's submission received 31 January 2017, page 2.

access limits consumers' ability to access this network of NFC payment terminals with their payment device.¹⁷²

- d. Australian Settlements Ltd supports open access to payment technologies, because this would increase consumer choice and encourage innovation in transit or loyalty cards.¹⁷³ It would also create economies of scale if digital wallets developed for Android devices can also be adapted to Apple devices.¹⁷⁴
- e. Bluechain Pty Ltd supports open access to mobile hardware interfaces because this would open up Apple devices to allow Bluechain to provide a full range of mobile payment services.¹⁷⁵
- f. Coles supports open access to NFC technology as a key enabler of continued improvements in payment technologies.¹⁷⁶
- g. eftpos submits that there should not be any technological impediment to the full range of payment functions to be made available on mobile devices, particularly given the widespread adoption of contactless payments in Australia.¹⁷⁷
- h. Heritage Bank supports open access to promote effective competition and consumer choice, enhancing growth in mobile payments in Australia.¹⁷⁸
- i. Visa comments generally that traditional stakeholders in electronic payments are all seeing change driven by technology and mobile payments and that a competitive mobile payment services market would provide substantial public benefits to consumers in Australia.¹⁷⁹

157. On the other hand, Apple submits that restricting NFC access allows it to provide a more secure and convenient user experience.

- a. Apple submits that 'permitting independent third party access to the embedded NFC radio to enable payments to be made and credentials to be stored outside of the secure element infrastructure will expose Apple iOS devices to ... security and fraud threats'.¹⁸⁰
- b. However, the Applicants do not agree that NFC access raises any particular security concerns, noting that none of the potential security issues claimed by Apple are directly linked to providing NFC access.¹⁸¹
- c. Apple also argues that NFC access would 'fundamentally break the simplicity and ease of use of the Apple Wallet app', because a NFC controller is designed only to be paired on a one-to-one basis with a particular application.¹⁸² If consumers were to use more than one digital wallet or payment app for their cards and tickets, changing between apps would require consumers to manually change the

172 Australian Retailers Association's submission received 31 January 2017, page 4.

173 Australian Settlements' submission received 16 August 2016, page 2.

174 Australian Settlements' submission received 16 August 2016, page 2.

175 Bluechain's submission received 18 August 2016, page 1.

176 Coles Supermarkets' submission received 18 August 2016, page 1.

177 eftpos Payments' submission received 18 August 2016, page 2.

178 Heritage Bank's submission received 18 August 2016, page 2.

179 Visa's submission received 18 August 2016, page 2.

180 Apple's submission received 26 October 2016, pages 4-5.

181 Applicants' submission received 11 November 2016, page 21.

182 Apple's submission received 26 October 2016, page 6.

NFC controller and this would require them to change their NFC controller settings each time they change wallets/payment apps.¹⁸³

- d. In response, the Applicants argue that Apple would be able 'provide a more elegant and user-friendly governance mechanism than it describes', considering Apple's control over both device hardware and operating system software.¹⁸⁴

158. A number of other interested parties also express concerns that NFC access on iPhones may lessen the competitiveness of Apple Pay:

- a. Dr Grischa Meyer submits that the proposed conduct is targeted at taking away consumers' power to choose the mobile payment service that suits them.¹⁸⁵
- b. Dr David Glance (Director of the Centre for Software Practice at the University of Western Australia) submits that the specialised hardware and software which integrates with the operating system is central to Apple's design of Apple Pay and reflects a deliberate decision by Apple 'to maintain the level of security, uniformity of user experience and overall quality' of Apple Pay.¹⁸⁶ Dr Glance submits that the NFC controller in Apple devices is specifically designed for the purpose of mobile payments rather than to provide general purpose functionality, such as the Bluetooth, camera, and wi-fi functionality on iPhones.¹⁸⁷
- c. David Thornton (an academic) submits that NFC access will lessen competition in mobile payment services by removing market pressures on the Applicants to invest or innovate in Card Tokenisation processes to protect consumer transactions.¹⁸⁸
- d. Martin Cook submits that the applications seek to destroy consumer confidence in the mobile payments industry.¹⁸⁹
- e. Matthew Seager submits that Australian consumers are being prevented from using Apple Pay compared to consumers in other countries with widespread contactless payment infrastructure.¹⁹⁰
- f. Brian Tran's submission after the draft decision does not agree with the Applicants' argument that it is not economically viable to offer mobile payments only on Android devices, noting that Android phones have a much larger market share than iPhones in Australia.¹⁹¹ Brian Tran further notes that NFC paytags would not continue to be offered by CBA and NAB if they were no substitute for NFC access and that there are many alternative mobile payment services using non-NFC-based technologies in overseas countries.¹⁹²
- g. Wayne Pulbrook's submission after the draft decision expresses concern that access to NFC by issuers would undermine the security of his mobile payments.¹⁹³

183 Apple's submission received 26 October 2016, page 6.

184 Applicants' submission received 11 November 2016, page 26.

185 Dr Grischa Meyer's submission received 31 August 2016, page 1.

186 Dr David Glance's submission received 9 September 2016, page 3.

187 Dr David Glance's submission received 9 September 2016, page 3.

188 David Thornton's submission received 30 September 2016, page 4.

189 Martin Cook's submission received 24 August 2016, page 1.

190 Matthew Seager's submission received 3 November 2016, page 1.

191 Brian Tran's submission received 4 December 2016, page 1.

192 Brian Tran's submission received 4 December 2016, page 2.

193 Wayne Pulbrook's submission received 7 February 2017, page 1.

Increased competition in digital wallets

159. The Applicants submit that NFC access would increase competition between digital wallets by allowing more effective competition in not only mobile payment services (which are fundamental to the viability of a digital wallet) but also on complementary functions and features and on the 'integration of the features of a wallet in all kinds of use'.¹⁹⁴
160. The following interested parties agree that NFC access is likely to increase competition in digital wallets:
- a. The ARA considers that the potential for innovation in digital wallets will be limited as long as Apple Pay remains the only app that can use the iPhone's NFC functionality.¹⁹⁵
 - b. Coles submits that consumer choice of digital wallets should not be restricted by a technological lockout.¹⁹⁶
 - c. FinTech Australia submits that open access would speed consumer adoption of digital wallets, which are a safer payment method than contactless cards.¹⁹⁷
 - d. MasterCard submits that open access would eliminate friction for the consumer and create interoperability. This would increase competition to provide the best digital wallet and benefit Australian consumers.¹⁹⁸
 - e. Tyro Payments Ltd submits that restricted NFC access stifles innovation and development of digital wallets.¹⁹⁹
161. Apple disagrees that NFC access would increase competition in digital wallets:
- a. Apple submits that Apple Pay complements issuer digital wallets by interacting with the issuers' own mobile apps.²⁰⁰ That is, the Apple Pay platform already allows issuers to integrate their mobile banking apps with Apple Pay functions to make NFC mobile payments. Aside from NFC mobile payments, issuers can already offer additional functions, such as account balance checking and funds transfers, to differentiate themselves from other digital wallets.²⁰¹
 - b. Apple states that issuers would also be able to work with Apple to innovate in relation to other features such as card provisioning or user authentication.²⁰²
162. Apple also submits that NFC access would distort rather than increase competition in the provision of digital wallets:
- a. Apple regards Apple Pay as a new service in Australia whose competitiveness may be stifled by a collective boycott that prevents Apple Pay from being made available to 65-70 per cent of Australian cardholders.²⁰³
 - b. Apple argues that the Applicants are not interested in promoting competition in mobile payment services as evidenced by the apparent reluctance of the major

194 Applicants' submission received 9 March, page 2.

195 Australian Retailers Association's submission received 31 January 2017, page 2.

196 Coles Supermarkets' submission received 18 August 2016, page 1.

197 FinTech Australia's submission received 30 September 2016, page 2.

198 MasterCard's submission received 5 September 2016, page 2.

199 Tyro Payments' submission received 4 August 2016, page 2.

200 Apple's submission received 26 August 2016, page 10, section 4.2.

201 Apple's submission received 26 February 2017, pages 7-8.

202 Apple's submission received 26 February 2017, page 6.

203 Apple's submission received 26 October 2016, page 3.

Applicant banks in not offering their cardholders access to either Android Pay or Samsung Pay. Apple argues that the Applicants seem interested in promoting their own digital wallets to the detriment of multi-issuer digital wallets.²⁰⁴

163. Submissions from individual consumers also express a view that the applications may be a way for the Applicants to limit competition from multi-issuer digital wallets:
- a. Brian Tran notes that, by withholding Apple Pay, the banks are stunting innovation of mobile payment services on iPhones as well as on other platforms.²⁰⁵
 - b. Brian Tran's submission after the draft determination also submits that the linked Apple Pay service allows a consumer to make mobile payments while they are in an issuer app performing other non-payment functions.²⁰⁶
 - c. Jason Discount, an IT professional, submits that granting the authorisation would allow the Applicants to block competition from more technologically competent third parties and restrict consumer choice.²⁰⁷
 - d. Trevor Long, a technology writer and commentator, notes that the opportunity for the Applicants to negotiate better terms and potentially delay the launch of competing digital wallet technology would only result in private benefits to the negotiating group.²⁰⁸
 - e. An anonymous consumer submits that their preference is for one wallet that can store payment cards from multiple banks instead of one for each bank. This consumer also expresses concern that NFC access may lead to issuers delaying the implementation of Apple Pay until they have reached critical mass with their own offering.²⁰⁹
164. The Applicants made submissions arguing that they cannot currently compete with Apple in digital wallet services because providing a digital wallet linking to Apple Pay functionality provides a worse user experience and allows no meaningful competition in mobile payment services.²¹⁰
- a. The ARA agreed with the Applicants that linking to Apple Pay for mobile payments does not allow other digital wallets to compete effectively with Apple Pay and will not provide the full range of opportunities provided by open access. The ARA notes that speed, convenience and ease of use are essential for any digital wallet and that any unnecessary friction in the payment process will severely reduce the benefits of digital wallets.²¹¹
 - b. However, Apple submits that this option provides a user experience that is almost identical to that of using an issuer digital wallet with NFC access on an Android device.²¹²

204 Apple's submission received 26 October 2016, page 3.

205 Brian Tran's submission received 14 October 2016, page 3.

206 Brian Tran's submission received 4 December 2016, page 5.

207 Jason Discount's submission received 17 August 2016, page 1.

208 Trevor Long's submission received 26 August 2016, page 2.

209 An Interested Party submission received 14 February 2017, page 1.

210 Applicants' submission received 11 November 2016, page 26.

211 Australian Retailers Association's submission received 31 January 2017, pages 4-5.

212 Apple's submission received 26 February 2017, page 8.

Increased innovation and investment in other applications using NFC

165. The Applicants submit that NFC access on iPhones would increase innovation and investment beyond digital wallets and mobile payment services, extending to features developed by retailers, telecommunications providers, transit authorities, government departments and financial technology providers.²¹³
166. The following interested parties agree that NFC access is likely to increase innovation and investment in other applications of NFC technology:
- a. Before the draft determination, the ARA submitted that NFC access would enable many future innovations in payments or access control.²¹⁴ One of these possibilities of significance to retailers is the increased ability to provide tailored loyalty programs using NFC technology at the point-of-sale.²¹⁵
 - b. After the draft determination, the ARA further notes that accessing the iPhone's NFC controller would allow retailers to provide digital wallets that provide a consistent and fully integrated experience for users, that retailers could then participate with effectively integrated loyalty programs, coupons and rewards.²¹⁶ Examples of innovative NFC applications include NFC-based rewards points redemption, airline lounge access, or check-in services at hotels.²¹⁷
 - c. Before the draft determination, Tyro Payments Ltd submitted that limiting third party access stifles innovation and competition that may also impact on related markets of transport services, passports and many other innovations that currently cannot use the NFC function on Apple devices.²¹⁸
 - d. Tyro Payments' submission after the draft determination again argues that restricting NFC access has secondary effects in markets beyond card payments such as passports, licences, transport, and loyalty solutions.²¹⁹
167. Apple expects, however, that banks and other app developers will continue innovating and developing new and better solutions without NFC access, creating new technologies as well as further innovations 'that piggyback off the benefits already available through Apple Pay and other digital wallet solutions'.²²⁰
168. Submissions from individual consumers have also disputed that NFC access is likely to lead to increased innovation:
- a. Brian Tran submits that the proposed conduct could decrease innovation by dis-incentivising Apple from investing further in Apple Pay in Australia and refraining from including new features such as transport cards or implementing an NFC rewards system.²²¹
 - b. Brian Tran's submission after the draft determination further submits that Apple Pay increases the possibility of NFC rewards cards. Moreover, retailers would retain the option to 'just scan normal rewards cards or even insert QR codes

213 Applicants' submission received 9 March 2017, page 2.

214 Australian Retailers Association's submission received 18 August 2016, page 2.

215 Australian Retailers Association's submission received 18 August 2016, page 2.

216 Australian Retailers Association's submission received 31 January 2017, page 2.

217 Australian Retailers Association's submission received 31 January 2017, page 3.

218 Tyro Payments' submission received 4 August 2016, pages 1-2.

219 Tyro Payments' submission received 31 January 2017, page 3.

220 Apple's submission received 26 August 2016, page 5, section 2.1.

221 Brian Tran's submission received 14 October 2016, page 3.

within their apps as in Australia Post's app'.²²² In addition, there are third party apps consolidating rewards schemes such as Stocard that allow offers from participating retailers to be shown inside the app.²²³

- c. David Thornton submits that authorisation will mean that the Applicants are no longer compelled by market forces to invest or innovate in technology that serves the overall public good²²⁴ and notes the Applicant banks' 'track record of resisting innovation, even where the benefits to themselves are great... as is the case with the New Payments Platform'.²²⁵
- d. Dr David Glance²²⁶ submits that authorisation will serve to lock customers out of Apple Pay not only for mobile payments but also prevent customers from making secure tokenised online payments using Apple Pay for in-app purchases and online.²²⁷
- e. John Montagu submits that the claimed innovation benefits are not only vague but counter-intuitive, as 'this is bizarre to integrate transport and loyalty functions into issuer wallets. It is not easy or logical for consumers to use their bank app to present a public transport card or to present a loyalty card in a coffee shop'. John Montagu also points to the opportunity for issuers to provide apps on the Android platform that demonstrate the benefits of possible innovation.²²⁸ John Montagu's also argues that loyalty and rewards functions are 'already part of the seamless operation of Apple Pay on the device'.²²⁹
- f. The South Australian Small Business Commissioner submits that NFC access is not necessary to drive competition and innovation, noting that new applications are rapidly developing outside the formal banking system.²³⁰
- g. Wayne Pulbrook notes that NFC access on other phones has not resulted in great innovations or technological breakthroughs.²³¹

Other claimed public benefits

169. The Applicants submit that the collective bargaining itself is likely to result in public benefits including increased input into contracts, reductions in information asymmetry, facilitation of market dynamics (in terms of supplying new areas or increasing competition in existing areas of supply) and transaction cost savings.²³²

170. The Applicants further submit that the collective boycott is required to give effect to the collective negotiation and meaningfully bring Apple to the negotiating table. They submit that this is likely to result in public benefits arising from facilitating the collective negotiation and therefore facilitating the realisation of the benefits.²³³

222 Brian Tran's submission received 4 December 2016, page 3.

223 Brian Tran's submission received 4 December 2016, page 3.

224 David Thornton's submission received 30 September 2016, page 4.

225 David Thornton's submission received 30 September 2016, page 11.

226 Director of the Centre for Software Practice at the University of Western Australia.

227 Dr David Glance's submission received 9 September 2016, page 2.

228 John Montagu's submission received 27 February 2017, pages 2-3.

229 John Montagu's submission received 15 March 2017, page 2.

230 South Australian Small Business Commissioner's submission received 9 August 2016, page 8.

231 Wayne Pulbrook's submission received 14 February 2017, p1.

232 Applicants' submission in support of the applications for authorisation received 26 July 2016, pages 41-44.

233 Applicants' submission received 7 October 2016, page 13.

171. Heritage Bank agrees that collective negotiations will address the problem of information asymmetry.²³⁴ Heritage Bank also argues that a collective boycott is necessary to ensure the parties can negotiate in good faith and will assist with managing the collective negotiations.²³⁵
172. Other interested parties do not discuss these other public benefits claimed to arise from the proposed conduct.

App Store access

173. The Applicants submit that the issue of App Store access was included as an issue for collective bargaining to ensure that any potential public benefits flowing from NFC access will not be undermined by any unreasonable restrictions on access to Apple's App Store, which is the only platform on which iOS apps can be distributed.²³⁶
174. The Applicants also note that Apple has broad discretion in rejecting apps for the App Store and cite instances where Apple has rejected applications for duplicating iPhone features or functionality (such as calls or podcasts).²³⁷
175. In contrast, Apple submits that it does not restrict card issuers from developing their own iOS apps, nor supporting mobile payments in other forms, pointing out that major Australian banks each have their own iOS banking app and that CBA and NAB both offer iOS apps that provide mobile payment services.²³⁸ Apple cites numerous examples of other digital wallets and mobile payment services available on the iOS platform, including PayPal, Vemo, Walmart Pay, Square, etc.²³⁹
176. Apple further notes that it has a universal set of terms and conditions for access to its App Store, which are publically available along with Apple's App Store Review Guidelines.²⁴⁰ Apple states that there is no nexus between the terms and conditions for access to the App Store and the Apple Pay service and that the claimed public benefits relating to App Store access are 'beyond speculative'.²⁴¹
177. Other interested parties do not comment on whether App Store access is likely to result in any of the claimed public benefits.

Submissions on public detriments

178. The Applicants note some possible public detriments arising from the proposed conduct but conclude that they are not likely to arise:
- a. The potential costs to Apple in developing an API for NFC access could be reflected in the commercial terms negotiated.
 - b. The possibility that Apple Pay would not be introduced in Australia or only on a limited basis if negotiations fail is a commercial decision for Apple.

234 Heritage Bank's submission received 18 August 2016, page 3.

235 Heritage Bank's submission received 18 August 2016, page 5.

236 Applicants' submission received 9 February 2017, page 33.

237 Applicants' submission received 9 February 2017, page 33.

238 Apple's submission received 26 August 2016, page 3, section 1.

239 Apple's submission received 26 August 2016, page 3, section 1.

240 Apple's submission received 26 February 2017, page 5.

241 Ibid.

- c. The risk of anti-competitive information exchange is mitigated by the limited scope of the proposed collective negotiation.²⁴²

179. Apple and other interested parties, however, express concerns regarding a range of potential public detriments.

Distortion in competition in mobile operating systems

180. Apple submits that it has restricted access to the NFC controller in iPhones because providing NFC access would undermine the security its customers expect when using Apple devices.²⁴³

- a. Apple argues that the Applicants are seeking authorisation to impose a collective boycott for the purpose of pressuring Apple to grant the bargaining group access to Apple's proprietary hardware and software, in which Apple has invested significant financial and other resources to differentiate Apple Pay from its competitors.²⁴⁴
- b. The NFC controller in Apple devices is the only hardware permitted to access the Secure Element chip in Apple devices and opening up external access to the NFC controller risks exposing Apple iOS devices to security and fraud threats.²⁴⁵
- c. Apple provides the Europol 2016 Internet Organised Crime Threat Assessment and a number of news articles supporting the claim that its approach to payment security is superior to that used by other devices.²⁴⁶

181. The Applicants dispute that Apple's approach to security is necessarily superior.²⁴⁷

- a. The Applicants argue that none of the claims about security issues discussed in these articles are directly linked to NFC access and only incidentally involve Android devices (i.e. not NFC digital wallets on recent models of mobile devices). Apple also has the ability to block an app from being added to the App Store if it considers the app's security is questionable.
- b. The Applicants also note that they have a financial and reputational incentive to ensure that security of mobile payments is not compromised.

182. A number of interested parties agree with Apple and consider that unrestricted access to NFC hardware would be detrimental:

- a. Andrew Smith submits that Apple's 'Walled Garden' approach to its integrated software and hardware provides significant privacy and security benefits to its customers. These benefits could be threatened by any forced access to Apple's hardware components.²⁴⁸
- b. Brian Tran submits that third party access to Apple's secure element chip could create security concerns amongst consumers and slow the adoption and further development of Apple Pay in Australia.²⁴⁹

242 Applicants' submission in support of the applications for authorisation received 26 July 2016, pages 44-47.

243 Apple's submission received 26 August 2016, page 11, section 4.2.

244 Apple's submission received 26 August 2016, page 12, section 4.2.

245 Apple's submission received 26 October 2016, pages 4-5.

246 Apple's submission received 26 October 2016, page 5 and at the attachments.

247 Applicants' submission received 11 November 2016, pages 21-25.

248 Dr Andrew Smith's submission received 30 August 2016, page 1.

249 Brian Tran's submission received 13 September 2016, page 1.

- c. Another individual consumer, another Brian Tran, points to the different Secure Element model used by Apple Pay, noting that this enhances its security, which should not be compromised in order to allow the Applicants to implement their own mobile payment services on iPhones.²⁵⁰
- d. Dr David Glance²⁵¹ notes that 'Apple Pay is a major business strategy for Apple', 'used to market its phones and will extend its integration into web and mobile apps'.²⁵² He submits that Apple should be permitted to use the specialised and integrated hardware and software system it has devised to provide Apple Pay in a way that allows Apple to maintain its desired level of security, uniformity of user experience and quality of its product.²⁵³
- e. David Thornton submits that allowing the Applicants to access NFC may allow them to 'ride on the coattails' of Apple Pay in order to offer an inferior solution.²⁵⁴
- f. John Montagu expresses support for Apple's security rationale for restricting access to its NFC controller, pointing to a Europol comment on instances of hackers exploiting access to the NFC controller to enable fraudulent payments.²⁵⁵ Mr Montagu also notes that the Applicants can already offer banking applications that perform account management services, which is a distinct offering to the provision of a centralised mobile payment service, which is the function of Apple Pay.²⁵⁶
- g. Martin Cook submits that it will not lead to any public benefits to force Apple to modify its hardware and software for third party access. Apple's business strategy is based on integrated devices with programs that work as Apple intended. The launch of Apple Pay has created a competitive mobile payment services market in Australia and caused improvements to be made to Android Pay in response.²⁵⁷
- h. Richard Thorek submits that a key benefit of multi-issuer digital wallets is the provision of streamlined payment services for consumers with increased security.²⁵⁸
- i. Robert Rigby submits that Apple should have control over the NFC chips within its devices and that issuers should try to negotiate with Apple individually if they wish, with the appropriate outcomes dictated by market forces rather than forced through collective negotiation.²⁵⁹
- j. Wayne Pulbrook submits that opening up access to the NFC controller may make the payment system vulnerable to attacks by hackers, which has recently happened with competing phones.²⁶⁰

250 Brian Tran's submission received 14 October 2016, pages 2 and 4.

251 Director of the Centre for Software Practice at the University of Western Australia.

252 Dr David Glance's submission received 9 September 2016, page 2.

253 Dr David Glance's submission received 9 September 2016, page 3.

254 David Thornton's submission received 30 September 2016, page 4.

255 John Montagu's submission received 18 October 2016, page 1.

256 John Montagu's submission received 18 October 2016, page 1.

257 Martin Cook's submission received 24 August 2016, page 1.

258 Richard Thorek's submission received 1 August 2016, page 1.

259 Robert Rigby's submission received 2 December 2016, page 1.

260 Wayne Pulbrook's submission received 27 August 2016, page 1.

Distortion in competition in mobile payment devices

183. The Applicants submit that smartphones are far more likely to be ‘the next significant form factor that customers use to interact with the NFC payment infrastructure than any alternative that is currently available or planned’. This is because smartphones are already widely used, capable of performing all of the functions of a digital wallet and are more flexible and configurable than any alternative device.²⁶¹
184. Apple submits, however, that the widespread use of iPhones is not relevant, noting that NFC-capable smartphones have been available for two years and that there is nothing preventing the banks from developing their own alternative mobile payment devices.²⁶²
185. Fintech Australia pointed to the importance of consumer choice across different mobile payment mechanisms and devices, commenting that mobile payments should enable customers ‘to transfer that money using the device or mechanism of their choice, to the third party of their choice’.²⁶³
186. Visa commented more generally that there appears to be ‘number of emerging transaction environments involving mobile devices, e-commerce and point-of-sale environments’.²⁶⁴
187. A number of interested parties discussed the ability for providers of mobile payment services to provide their own NFC hardware:
- a. Brian Tran submits that issuers ‘can simply use other accessories such as wristbands (which is used by Cash by Optus) and tags (which is used by Commonwealth Bank and NAB)’.²⁶⁵
 - b. As a card issuer who provides mobile payment services via its own NFC hardware, Coles describes its Coles Mobile Wallet app and Coles paytag as providing a simple and integrated experience that allows customers to make mobile payments using the paytag and to use the Coles Mobile Wallet app on both iPhones and Android phones to ‘control the tag, check balances and review their flybuys loyalty offers all in one place’.²⁶⁶

Reduction in competition in payment cards

188. Apple submits that NFC access allowing issuers to provide their own mobile payment services risks distorting competition in the supply of payment cards and digital wallets. Apple submits that multi-issuer digital wallets enable consumers to load cards from multiple issuers and increase the ease of switching cards at the point-of-sale. In turn, this is likely to increase competitive tension between payment cards at the point-of-sale.²⁶⁷
189. Apple further submits that the Applicant banks appear to be extinguishing the increased competition introduced by multi-issuer digital wallets, as demonstrated by the Applicants’ ‘clear preference ... for their own proprietary issuer digital wallets, with many

261 Applicants’ submission received 9 March 2017, page 5.

262 Apple’s submission received 26 October 2016, pages 8-9.

263 FinTech Australia’s submission received 30 September 2016, page 2.

264 Visa’s submission received 18 August 2016, page 2.

265 Brian Tran’s submission received 14 October 2016, page 4.

266 Coles submission received 18 August 2016, page 1.

267 Apple’s submission received 31 January 2017, pages 4-10.

not offering Android Pay or Samsung Pay, despite making it clear during the course of this authorisation application that the issues raised by the applicant banks as obstacles to them agreeing terms with Apple to make their cards available to customers through Apple Pay do not apply to Android Pay or Samsung Pay (eg Samsung and other Android-based devices already offer the applicant banks embedded NFC access for proprietary issuer digital wallets).²⁶⁸

- a. The Applicants dispute that they are unwilling to support other multi-issuer digital wallets, such as Android Pay and Samsung Pay, noting that both Westpac and Bendigo and Adelaide Bank have signed up to Android Pay and that CBA offers Android Pay mobile payment services to cardholders of its BankWest subsidiary.²⁶⁹
- b. A submission from Brian Tran argues, however, that only issuers who do not already have mobile payment services have signed up to Android Pay. Brian Tran notes that, before Android Pay, neither Bendigo and Adelaide Bank nor BankWest offered cardholders any mobile payment services and Westpac previously only provided mobile payment services to a select group of Samsung users.²⁷⁰

190. Submissions from interested parties opposing authorisation have agreed that switching between payment cards within a multi-issuer wallet is easier and that there are technical and usability issues with switching between separate issuer wallets:

- a. Brian Tran describes the user experience of switching between separate mobile payment apps on the Android device as the following:
*'First of all, if you have an ANZ account, CommBank account, Westpac account and Citibank account, you'd first need to download Android Pay, CommBank, Westpac and CitiPay. Then you would need to decide which one is your default. If you need to pay with CommBank the most, you'd choose CommBank. Thing is, if you need to pay with any other mobile wallet, you need to venture through the settings, just to change your default NFC payment option, in order to pay.'*²⁷¹
- b. John Montagu submits that there is a problem for consumers inherent in the 'operational gymnastics of switching between the apps'.²⁷²
- c. Wayne Pulbrook notes that he can easily choose between American Express or ANZ within his Apple Pay wallet.²⁷³

191. Interested parties opposing authorisation have expressed concerns that NFC access may lead to reduced competition in payment cards:

- a. Brian Tran's submission following the draft determination argues that the issuers wish to lock users into one bank through the digital wallet app and do not wish to compete with each other by laying out their cards with other banks within the same multi-issuer digital wallet. Brian Tran is concerned that NFC access will drastically reduce competition between banks.²⁷⁴

268 Apple's submission received 31 January 2017, page 5.

269 Applicants' submission received 21 November 2016, pages 3-4.

270 Brian Tran's submission received 4 December 2016, page 4.

271 Brian Tran's submission received 4 December 2016, page 4.

272 John Montagu's submission received 27 February 2017, page 2.

273 Wayne Pulbrook's submission received 14 February 2017, page 1.

274 Brian Tran's submission received 4 December 2016, page 3.

192. eftpos submits that it is opposed to any restrictions on the ability for mobile devices to make mobile payments using the eftpos scheme, which is currently the case in contactless payments with dual-network cards.²⁷⁵
- a. Apple notes that none of the Applicant banks have made eftpos payments available through their own proprietary issuer digital wallets 'because they prefer consumers to use credit cards for transactions where the banks earn higher interchange fees'.²⁷⁶
 - b. The Applicants have denied this assertion, stating that there are a complex set of rules likely to limit the ability of issuers to enable eftpos mobile payments and that the Applicants have enabled debit scheme cards on their mobile wallets even though the interchange fees for debit scheme transactions are significantly lower than credit scheme transactions.²⁷⁷

Potential for collusion between the Applicants

193. Other interested parties voice general concerns regarding potential detriments. For instance:
- a. Jason Discount²⁷⁸ submits that any cartel of the large banks will block competition and consumer choice.²⁷⁹
 - b. The South Australian Small Business Commissioner John Chapman considers that creation of a banking cartel is not an appropriate way to deal with emerging technology and will only entrench behaviour designed to reduce competition and innovation.²⁸⁰
194. In this regard, the Applicants have stated that they will put in place 'protocols and procedures' to make sure that the scope of the matters discussed as part of the collective negotiation is 'appropriate and in compliance with the terms of the authorisation'.²⁸¹

Delay in access to Apple Pay

195. The Applicants submit that the limited scope of the collective negotiations combined with their own commercial incentives will ensure the negotiations are concluded quickly.²⁸² The Applicants also note that issuers face significant commercial pressure from consumer demand and ANZ (and other issuers) offering Apple Pay to cardholders not to delay Apple Pay in Australia.²⁸³
196. Apple submits that collective negotiation will further entrench the Applicants' current position of resisting serious engagement with Apple regarding Apple Pay, 'ensuring that [the bargaining group] can only advance in lockstep with the slowest, least willing member' in the knowledge that they can continue to hold out with minimal competitive

275 eftpos Payments' submission received 18 August 2016, page 2.

276 Apple's submission received 31 January 2017, page 10.

277 Applicants' submission received 9 February 2017, page 8.

278 An IT professional.

279 Jason Discount's submission received 17 August 2016, page 1.

280 South Australian Small Business Commissioner's submission received 9 August 2016, page 6.

281 Applicants' letter to the ACCC received 27 October 2016, page 4.

282 Applicants' submission received 7 October 2016, page 8.

283 Applicants' submission received 7 October 2016, page 27.

threat that other issuers in the bargaining group will introduce Apple Pay for their cardholders.²⁸⁴

197. Apple argues that, given the incentives on issuers to favour their own wallets over multi-issuer digital wallets, the authorisation will protect the Applicants from competition with Apple and with each other for the period of authorisation, slowing innovation and reducing consumer choice, resulting in significant consumer detriment.²⁸⁵

198. Consumers opposing authorisation agree with Apple that a delay to the expansion of Apple Pay arising from authorisation is likely to result in public detriments:

- a. Dr David Glance²⁸⁶ submits that authorisation will prevent the Applicants' cardholders from benefiting from the added security of Apple Pay transactions and may also impact the broader eCommerce market by preventing the Applicants' cardholders from using Apple Pay through their Safari internet browser.²⁸⁷
- b. John Montagu submits that the most likely outcome of authorisation is an 18 month delay to Apple Pay and that the existence of multiple issuer digital wallets presents significant technical and usability challenges for the consumer.²⁸⁸
- c. Wayne Pulbrook argues that the Applicants are blocking consumer choice to access Apple Pay.²⁸⁹

ACCC assessment

199. The ACCC's assessment of the proposed conduct is carried out in accordance with the relevant net public benefit tests²⁹⁰ contained in the *Competition and Consumer Act 2010* (Cth) (the **CCA**). Broadly, the ACCC must not grant authorisation unless it is satisfied in all the circumstances that the proposed conduct is likely to result in a public benefit, and that public benefit will outweigh any likely public detriment, including any lessening of competition.

Relevant areas of competition

200. Without precisely defining the market, the ACCC considers the following areas of competition to be relevant to its analysis of the likely public benefits and likely public detriments of the proposed conduct – the supply in Australia of:

- a. digital wallets
- b. mobile payment services
- c. mobile operating systems
- d. mobile payment devices
- e. payment cards.

284 Apple's submission received 26 August 2016, page 7, section 2.3

285 Apple's submission received 26 August 2016, page 16.

286 Director of the Centre for Software Practice at the University of Western Australia.

287 Dr David Glance's submission received 9 September 2016, page 1.

288 John Montagu's submission received 27 February 2017, page 1.

289 Wayne Pulbrook's submission received 27 August 2016, page 1.

290 Subsections 90(5A), 90(5B), 90(6), 90(7), 90(8).

201. The ACCC considers that the precise definition of the relevant areas of competition is not required for assessing the proposed conduct. The ACCC can consider the areas of competition in a broad sense when assessing any public benefits or detriments likely to arise from the proposed conduct.

202. The ACCC also notes that any changes in these areas of competition may, in turn, affect other related markets. That is, impacts on competition between digital wallet services and mobile payment services are likely to impact on competition in the supply of mobile operating systems; changes to competition in the supply of payment card services are also likely to impact on competition in the supply of retail banking services more generally.²⁹¹ To the extent relevant, the ACCC has considered such likely flow-on effects in its assessment of the proposed conduct.

The supply of digital wallets in Australia

203. The Applicants submit that the relevant area of competition impacted by the proposed conduct is the supply of mobile payments and digital wallets in Australia,²⁹² defining mobile payments as ‘a payment or transfer of money initiated on a mobile device’²⁹³ and a digital wallet as ‘a smartphone application or service that facilitates mobile payments and may also store other valuable information’.²⁹⁴

204. Apple submits that one of the areas of competition affected is the supply of digital wallet services and presentment methods.²⁹⁵ Other interested parties did not expressly describe relevant areas of competition, although PayPal Australia Pty Ltd commented that the Applicants’ definition of digital wallet is overly broad.²⁹⁶

205. As discussed previously in the Background section, the ACCC has adopted different definitions for digital wallets and for mobile payments, both of which are relevant areas of competition impacted by the proposed conduct.

The supply of mobile payment services in Australia

206. The ACCC considers that the supply of mobile payment services in Australia is an area of competition impacted by the proposed collective negotiations on the issue of NFC access, which is directed at enabling the Applicants to supply competing mobile payment services for iPhone users.

207. The submissions provided by the Applicants on the likely public benefits of increasing competition and consumer choice in mobile payment services include that the ability to provide issuer digital wallets integrating Apple Pay functionality does not allow ‘a

291 See, e.g., Visa-RFi Group Australian Payments Report, ‘*The changing payments behaviour of Australian consumers and the impact on banking relationships*’, June 2015, page 14: <https://www.visa.com.au/content/dam/VCOM/regional/ap/australia/global-elements/Documents/research-and-trends-visa-rfi-australian-payments-report.pdf>.

292 Applicants’ submission in support of the applications for authorisation received 26 July 2016, page 24.

293 Applicants’ submission in support of the applications for authorisation received 26 July 2016, page 16.

294 Applicants’ submission in support of the applications for authorisation received 26 July 2016, page 17.

295 Apple’s submission received 26 August 2016, pages 9-10, section 3.1.

296 PayPal submission received 18 August 2016.

payment mechanism that differentiates itself from, or innovates in relation to, the Apple Pay mechanism', i.e. a different mobile payment service.²⁹⁷

208. While some interested parties such as Dr David Glance are of the view that allowing the issuers to implement their own mobile payment services using the embedded NFC controller in iPhones is unlikely to result in greater competition or benefits for consumers,²⁹⁸ the Applicants provide examples of potential innovations, e.g. requiring different fingerprint verifications for different cards or implementing voiceprint verification.²⁹⁹

209. As discussed, the use of contactless card payments using NFC technology is already well established in Australia, providing a fast and low-friction payment method with widespread consumer and merchant acceptance. In addition, market research suggests that consumers who are most likely to transition to mobile payments tend to be consumers who currently use contactless cards rather than consumers who are not aware of or have never made a contactless payment.³⁰⁰ Therefore, mobile payments are most likely to compete with contactless card payments for users.

210. Accordingly, the ACCC notes that the availability of contactless card payments will also impose some competitive constraint in the supply of mobile payment services in Australia, as there is likely to be a degree of substitutability between mobile payments and contactless card payments.

The supply of mobile operating systems in Australia

211. The ACCC considers that the supply of mobile operating systems in Australia is an area of competition affected by the proposed collective negotiations. Apple competes with other suppliers of mobile operating systems such as Google and they have different competitive strategies in relation to their offerings.

212. Apple offers its devices as an integrated hardware and software product, which enables Apple to maintain greater control over the user experience; in contrast, Google is not a hardware manufacturer but provides its Android operating system for free to hardware manufacturers as a separate product to the device hardware.

213. Apple and Google's differentiated approach to integration of mobile operating system software with device hardware has also led to different mechanisms for making mobile payments. Apple uses Secure Element hardware to store and tokenise payment credentials in each device. Google, in contrast, uses HCE software to store and tokenise payment credentials in a database external to the device.

214. As the proposed conduct is likely to impact competition in the supply of mobile payments, which is a function of mobile operating systems, it is also likely to impact competition between suppliers of mobile operating systems.

297 Applicants' submission received 11 November 2016, page 11.

298 Dr David Glance's submission received 9 September 2016, pages 3-4.

299 Applicants' submission received 11 November 2016, page 12.

300 The Visa-RFi Group Australian Payments Report, '*The changing payments behaviour of Australian consumers and the impact on banking relationships*', June 2015, page 24:
<https://www.visa.com.au/content/dam/VCOM/regional/ap/australia/global-elements/Documents/research-and-trends-visa-rfi-australian-payments-report.pdf>.

The supply of mobile payment devices in Australia

215. A range of devices are available which are capable of making mobile payments. These include smartphones, smart watches, fitness trackers, and other NFC-capable accessories. The proposed conduct may impact competition between suppliers of mobile payment devices, if authorisation results in NFC access.
216. This is because NFC access on iPhones may affect the developing mobile payments market to focus its innovations on mobile payments made using the in-device NFC on smartphones, thereby impacting competition and innovation between the full range of NFC-capable mobile payment devices.

The supply of payment cards in Australia

217. The ACCC considers the supply of payment cards to consumers in Australia is relevant to this assessment, as payment cards must be provisioned onto a digital wallet to allow it to make NFC mobile payments in-store.
218. A key difference between multi-issuer digital wallets and issuer digital wallets is that multi-issuer digital wallets can hold payment cards from different issuers. This has the potential to increase competition between payment cards at the point-of-sale rather than encouraging the use of one default payment card. As the proposed conduct is targeted at the future development and expansion of multi-issuer digital wallets, a relevant area of competition is the rivalry between payment cards.
219. The proposed conduct may also impact competition between card issuers who choose to participate in the proposed conduct and those who do not. For example, ANZ and Amex are unlikely to participate in the proposed conduct, but as issuers of payment cards they may be impacted by the outcome of the collective bargaining.

Future with and without

220. To assist in its assessment of the proposed conduct against the statutory tests, the ACCC compares the likely future with the conduct the subject of the authorisation to the likely future without the conduct the subject of the authorisation. The ACCC compares the public benefits and detriments likely to arise in the future where the conduct occurs against a future where the conduct does not occur.
221. The ACCC considers that with the proposed conduct, the Applicants will enter into a limited form of collective boycott and negotiation with Apple on NFC access and App Store access, with the period of negotiation potentially extending for 18 months from the date of authorisation.
222. The ACCC recognises that the outcome of the proposed collective bargaining and boycott is uncertain. However, in considering the likely future with the proposed conduct, the ACCC does not have to predict the likely outcome of the collective negotiations on the relevant issues. In this instance, the ACCC has assessed whether the claimed public benefits are likely to arise assuming that the Applicants were successful in negotiating NFC access and App Store access, and weighed any public benefits against the public detriments likely to arise.

223. Without the proposed conduct, the Applicants will either each negotiate separately with Apple or not at all. The ACCC accepts that those Applicants that reach agreement with Apple to make their cards available on Apple Wallet are likely to do so on Apple's standard terms of no NFC access.

224. The ACCC's view on the likely future without accords with that of most interested parties. The Applicants submit that most issuers will eventually enter into agreements for Apple Pay on Apple's terms.³⁰¹

Increased bargaining power

225. Bargaining power refers to the strength of a party in negotiations with another party. The outcome of negotiations (the terms of supply) will generally depend on the negotiating strengths of both parties. Where negotiating strengths are unequal, one party to the negotiation may be able to unduly influence terms and conditions of supply. Formation of a collective bargaining group may improve the group's collective bargaining strength and may enable more efficient terms of supply to be negotiated than would otherwise be the case.

226. The Applicants submit that Apple has considerable bargaining power in relation to card issuers. In particular, they argue that Apple has significant bargaining power in negotiations relating to Apple Pay due to its control of both a key operating system and key mobile hardware.³⁰² The Applicants argue that Apple holds a 'competitive bottleneck' whereby Apple competes in the mobile device market to attract a large group of customers and then exercises market power over firms that want to do business with those customers.³⁰³

227. The Applicants submit that economic theory predicts that Apple should exercise monopoly power over application developers (including the Applicants) by requiring them to pay for access to iPhone consumers.³⁰⁴ The Applicants submit that in individual negotiations, each Applicant is likely to have to accept Apple's terms if they want to offer Apple Pay to their customers because the only way to access customers of Apple devices is through the Apple platform. The Applicants believe that collective negotiations are necessary in order to achieve satisfactory and efficient outcomes from negotiations with Apple.

228. The ACCC notes that Apple is not a monopoly supplier of mobile payment devices on which mobile payments can be made. Apple faces competition from a range of other handset manufacturers and faces competitive pressure to offer mobile devices with functionalities that its rivals offer. In particular, Apple currently faces competition from mobile payment devices that use the Android operating system which incorporate Android Pay, Samsung Pay or issuer digital wallets. As noted in paragraph 103, for the past two years iPhone sales averaged around 35.8 per cent of the smartphone market in Australia. As discussed at paragraphs 53 to 71, there is a growing range of devices apart from smartphones being developed with mobile payment functionality.

229. As discussed at paragraphs 209 to 210, there is a degree of substitutability between mobile payments and contactless card payments, because contactless cards provide a

301 CRA report supporting Applicants' submissions, page 21.

302 Applicants' submission received 26 July 2016, page 6.

303 Applicants' submission received 7 October 2016, the attached Expert Report of Dr Susan Athey, page 9.

304 Applicants' submission received 7 October 2016, the attached Expert Report of Dr Susan Athey, page 11.

similar service to mobile payment services; allowing an NFC-based transaction to be made quickly and easily at the point-of-sale.

230. The ACCC also notes that not only are the Applicants and Apple all providers—or potential providers—of digital wallets and in this sense are competitors, this area of competition is complicated by the fact that the Applicants and Apple need each other, to some extent, to succeed:

- a. The Applicants need permission to access Apple devices in order to provide consumers with their own digital wallets and mobile payment services that use the iPhone's embedded NFC controller (i.e., in order to bypass agreeing with Apple over the terms of accessing Apple Pay). Alternatively, the Applicants need to reach agreement with Apple in order to be able to offer their customers the ability to use Apple Pay, either through Apple Wallet or through integrating their digital wallets with the Apple Pay mobile payment service.
- b. Apple needs the Applicants to populate Apple Wallet with their cards in order for Apple Pay to reach a substantial proportion of consumers. This is particularly the case for the three major Applicants, who together make up around 65 per cent of credit card use in Australia.

231. In this sense, both Apple and the Applicants have some ability to exclude each other from offering digital wallet and mobile payment services to their customers. As discussed at paragraphs 46 and 47, Apple is vertically integrated from device hardware to operating system software through to digital wallet application software and can exclude issuers from offering digital wallets with embedded NFC on Apple devices. The Applicants are vertically integrated from issuing payment cards through to the provision of digital wallets and can control whether their payment cards can be used via Apple Pay.

232. However, given the global nature of Apple's business, its global stance on NFC access and its global terms and conditions for App Store access, it is clear that on these issues Apple has significant bargaining power as compared with each individual Applicant. The ACCC considers that the opportunity for the Applicants to collectively negotiate and boycott would place the Applicants in a better negotiating position with Apple on NFC access and App Store access relative to individual negotiations by each party.

ACCC's approach to considering the likely public benefits and detriments from the proposed conduct

233. In assessing the applications for authorisation, in order to determine whether the claimed public benefits and detriments are likely to result, it is open to the ACCC to consider the likely outcome of the collective negotiations. However, in this instance, rather than attempting to predict the likely outcomes from the collective negotiations, the ACCC has assessed whether the claimed public benefits are likely to arise assuming that the Applicants were successful in negotiating NFC access and App Store access, and weighed these against the likely public detriment including from any resulting lessening of competition.

Consideration of public benefits

234. The CCA does not define what constitutes a public benefit and the ACCC adopts a broad approach. This is consistent with the Australian Competition Tribunal (the

Tribunal) which has stated that the term should be given its widest possible meaning, and includes:

*...anything of value to the community generally, any contribution to the aims pursued by society including as one of its principal elements ... the achievement of the economic goals of efficiency and progress.*³⁰⁵

235. The Applicants submit that the proposed conduct would increase their likelihood of being able to offer their own digital wallets to iPhone users without relying on Apple Pay for making mobile payments.

236. As noted above, the ACCC has considered whether if the Applicants were successful in negotiating NFC access and App Store access, that access is likely to result in public benefits.

237. The ACCC considers that NFC access and the collective negotiations more generally are likely to result in:

- a. a significant public benefit from increased competition, consumer choice, innovation and investment in mobile payment services
- b. a small public benefit from increased competition in digital wallets
- c. no public benefit from increased innovation and investment in other applications of NFC technology
- d. no public benefit from increased adoption of mobile payments in Australia
- e. a small public benefit from reduced information asymmetry, and
- f. no public benefit from facilitation of market dynamics or transaction cost savings.

238. The ACCC does not consider that App Store access is likely to result in any public benefits.

NFC access

Increased competition, consumer choice, innovation and investment in mobile payment services

239. The Applicants submit that 'access to the NFC function will allow mobile wallets to compete effectively in a range of dimensions and circumstances', including 'on the payment function (which is fundamental to the operation and viability of a mobile wallet), as well as on their complementary (non-payment) features'.³⁰⁶ This section will consider the impact of NFC access on competition in the **payment function**. (The impact of NFC access to competition in relation to the **non-payment functions** of digital wallets is discussed in the next section on *Increased competition in digital wallets* at page 58.)

240. The ACCC considers that lack of NFC access on iPhones prevents the Applicants from directly competing with Apple Pay in the supply of mobile payment services using the embedded NFC controller on iOS devices. The ACCC also accepts that access to NFC

305 *Queensland Co-operative Milling Association Ltd* (1976) ATPR 40-012 at 17,242; cited with approval in *Re 7-Eleven Stores* (1994) ATPR 41-357 at 42,677.

306 Applicants' submission received 9 March 2017, page 2.

technology and iPhone customers are both likely to be important for the success of a mobile payment service in Australia.³⁰⁷

241. However, the ACCC notes that there is already some competition in mobile payment services in Australia, arising from the existing:

- a. opportunities for issuers to use external NFC hardware for mobile payment services
- b. opportunities for issuers to use alternative payment technologies for mobile payment services, and
- c. competitive tension from mobile payment services on other operating systems such as Android Pay, Samsung Pay, and issuer digital wallets on the Android platform.

242. Despite these factors, the ACCC considers that NFC access is likely to result in a significant public benefit from increased competition in mobile payment services.

a) NFC access is likely to increase competition in mobile payment services

243. The Applicants submit that ‘there is currently no potential for competition with the Apple Pay payment service on the iPhone platform’³⁰⁸ and that NFC access would enable direct competition with Apple Pay, increasing competition in mobile payment services and providing a number of distinct public benefits including:

- a. providing competitive constraint on the fees charged by Apple for Apple Pay to promote efficiency in pricing of mobile payment services³⁰⁹
- b. promoting innovation and differentiation in the key elements of a mobile payment service, e.g. in the loading of payment cards, selection of payment cards, etc,³¹⁰ and
- c. increasing competition in the related market for digital wallet services, as mobile payments are an essential function of digital wallets (discussed in section on *Increased competition in digital wallets* below).

244. Additionally, the Applicants submit that NFC access on iPhones would increase the available consumer market and increase the ability to provide consumers with ‘a cohesive and convenient customer experience across platforms’.³¹¹ The Applicants submit that inability to access the NFC controller leads to a ‘fragmented customer experience across platforms’ and adds to the costs of investing to develop mobile payment technology for consumers and the consumer engagement required to explain the product and its additional value’.³¹²

245. The Applicants also submit that iPhone users represent a key customer segment for Australian credit and debit card issuers in relation to mobile payment technology:

‘The average iPhone user tends to be wealthier and likely to conduct more and larger transactions than other customers. iPhone users are also more likely than

307 Applicants’ submission received 9 February 2017, page 32.

308 Applicants’ submission received 9 February 2017, page 21.

309 Applicants’ submission received 9 February 2017, page 22.

310 Applicants’ submission received 9 February 2017, pages 23-24.

311 Applicants’ submission received 11 November 2016, page 2.

312 Applicants’ submission received 11 November 2016, page 2.

*the average customer to value the ability to make mobile payments, as they adopt and consume technology more enthusiastically than other smartphone users.*³¹³

246. On the other hand, Apple disputes that NFC-capable iPhones constitute a separate product market³¹⁴ and disagrees that there is any need to separately promote different Android and iOS versions of the Applicants' apps.³¹⁵

247. The ACCC considers that lack of NFC access on iPhones prevents the Applicants from directly competing with Apple Pay in the supply of mobile payment services using the embedded NFC controller on iOS devices. The ACCC also accepts that access to NFC technology and iPhone customers are both likely to be important for the success of a mobile payment service in Australia. NFC access would allow the Applicants to provide their own integrated mobile payment service on iPhones using NFC technology, providing a competitive constraint on Apple in its pricing for Apple Pay and bringing additional benefits to consumers arising from the competitive disciplines and incentives to innovate and offer competing services.

248. Nevertheless, the ACCC notes there remains some ability for the Applicants to provide a partial competitive response to Apple Pay, for instance by using external NFC hardware, alternative mobile payment technologies, and offering mobile payments on the Android platform. The limitations and opportunities provided by these possibilities are discussed in turn.

b) Competing mobile payments using external NFC hardware

249. The Applicants submit that external NFC hardware does not provide the consumer choice and competition that direct NFC access can because NFC paytags have operational disadvantages and provide an inferior user experience to consumers.³¹⁶

250. The ACCC acknowledges that mobile payments made with the NFC paytags currently used in Australia have inherent limitations that often result in a worse consumer experience when compared with mobile payments made with in-device NFC controllers.³¹⁷

251. Nevertheless, there is a large variety of NFC hardware currently available that could introduce additional functionalities beyond what is possible for the NFC paytags used by CBA and NAB. Moreover, there is also a rapidly increasing variety of more sophisticated devices that enable mobile payments such as fitness trackers and smart watches. As outlined in paragraphs 53 to 71, there are many examples of varied forms and functions of external NFC hardware that are available today.

252. It therefore appears that the advancing capabilities of external NFC hardware may offer scope for issuers to circumvent Apple Pay on the iOS operating system by using their own NFC hardware to supply a proprietary mobile payment service.

313 Applicants' submission received 7 October 2016, page 10.

314 Apple's submission received 26 October 2016, page 8.

315 Apple's submission received 31 January 2017, page 18.

316 Applicants' submission received 9 February 2017, pages 25-27.

317 Applicants' submission in support of the applications for authorisation received 26 July 2016, the attached Expert report of Charles River Associates dated 12 May 2016, page 5.

253. The Applicants also submit that, with the increased competition created by NFC access, many other providers of mobile wallets would emerge to meet consumer demands such as Optus, Singtel, or Orange.³¹⁸ The ACCC notes, however, that Optus already offers a digital wallet with its own mobile payment service using an NFC-capable wristband.

254. The ACCC therefore considers that there is some opportunity to provide mobile payment services in competition with Apple Pay through the use of external NFC hardware.

c) Competing mobile payment services using other payment technologies

255. The Applicants submit that 'NFC technology is now the global standard for contactless payments and is ubiquitous in Australia with usage rates over 75%'.³¹⁹

256. Whilst the ACCC accepts that NFC technology is important to mobile payment services in Australia, the ACCC notes that there are examples of other technologies such as QR codes gaining widespread acceptance in overseas markets, e.g. WeChat in Hong Kong and South Africa, Line Pay in Thailand and Japan, and Kakao Pay in South Korea.³²⁰

257. The ACCC also accepts that significant additional investment is likely to be required to implement alternative payment technologies to NFC in Australia on a large scale. However, it may be possible for alternative technologies, such as QR codes, to allow for a partial competitive response to Apple Pay. For example, CBA's recent update to its Albert payment terminals to accept QR codes suggests that, even in Australia, non-NFC-based mobile payment services may be readily implemented on select merchant terminals to allow access to the iPhone user base whilst bypassing Apple Pay.

258. Without expressing a view on the likely global standard, ACCC accepts that the prevalence of NFC-capable payment terminals in Australia means that NFC hardware is a key component of the supply of mobile payment services within Australia. The ACCC also agrees with the Applicants that implementing alternative payment technologies such as QR-code scanners or Bluetooth communication would require significant additional investment.³²¹

d) Mobile payment services on other operating systems

259. The ACCC considers that the availability of alternative mobile payment services on the Android platform also exerts some competitive pressure on Apple Pay, despite there being significant barriers and costs for consumers switching between the iOS and Android platforms.

260. The Applicants submit that mobile payment services on the Android operating system will not provide an effective constraint on Apple and will not offer iPhone users the benefit of greater choice in mobile payment services.³²²

318 Applicants' submission received 9 March 2017, page 9.

319 Applicants' submission received 21 November 2016, page 6.

320 Brian Tran's submission received 4 December 2016 submission, page 6.

321 Applicants' submission received 21 November 2016, page 6.

322 Applicants' submission received 21 November 2016, page 1.

261. However, recent developments indicate that a variety of mobile payment services will be announced for other operating systems, some of which will be accessible by iPhone users. For instance, the Android Wear 2.0 operating system for smartwatches was released in February 2017 and is compatible with iPhones. Android Wear 2.0 also has the ability to make HCE-based mobile payments through Android Pay, though this function is currently limited to Android phone users. Media reports following the launch of Android Wear 2.0 indicate, however, that Google will soon add support for Android Pay on smartwatches running Android Wear 2.0 that are paired with iPhones,³²³ which means that iPhone users with an Android smartwatch may soon be able to choose between Apple Pay or Android Pay for mobile payments.
262. Similarly, it is likely that NFC-based mobile payment services will soon be introduced to fitness trackers, which can usually pair with smartphones running both Android and iOS operating systems.
263. In addition to these competitive constraints that appear likely to arise in the near future, the ACCC considers that there is already some existing competitive tension between Apple Pay and the NFC-enabled digital wallets available on the Android platform (Android Pay, Samsung Pay, NAB Pay, etc), due to the competition between the iOS and Android operating systems. The ACCC notes that issuers can also indirectly compete with Apple Pay by providing digital wallets with their own NFC mobile payment service on the Android platform.

e) Conclusion on increased competition in mobile payment services

264. The ACCC accepts that the lack of NFC access on iPhones prevents the Applicants from directly competing with Apple Pay in the supply of mobile payment services using the embedded NFC controller on iOS devices.
265. The ACCC recognises the importance of NFC technologies in the Australian payments landscape, which may limit the scope for alternative technologies, such as QR codes, to be adopted as a possible competitive response.
266. The ACCC therefore considers that NFC access as a result of the proposed conduct is likely to result in a significant public benefit from providing increased competition in mobile payment services on iPhones. This increased competition, particularly in the short term, is likely to provide a competitive constraint on Apple in its pricing for Apple Pay and increase competition, innovation and investment in mobile payment services made via the embedded NFC controller on Apple devices.

Increased competition in digital wallets

267. For the reasons already outlined, the ACCC considers that NFC access is likely to increase competition in mobile payment services. Because mobile payment services are an important feature of digital wallets, this is likely to flow through as increased competition in digital wallets and is likely to result in a small public benefit.

323 See, e.g., Android Police, 'Android Pay for Android Wear is here, and this is how it works', 8 February 2017: <http://www.androidpolice.com/2017/02/08/android-pay-for-android-wear-is-here-and-this-is-how-it-works/>; Wearable, 'Android Wear on iPhone', 14 February 2017: <https://www.wearable.com/android-wear/google-launches-android-wear-for-ios-1603>.

268. The ACCC considers the increased competition is likely to be limited by:

- a. issuers' existing ability to compete on all functions of digital wallets aside from the function of making NFC mobile payments on iPhones using the embedded NFC controller
- b. issuers' existing ability to provide a digital wallet linking to Apple Pay for this function
- c. issuers' existing ability to bypass Apple Pay on iPhones by using external NFC hardware, and
- d. the risk that NFC access could also reduce competition in digital wallets, due to issuers' commercial incentive to discriminate against multi-issuer digital wallets.

269. These issues are discussed in turn.

a) Ability to compete on non-payment functions

270. The ACCC notes that the Applicants currently have considerable scope to compete and innovate regarding all other functions of a digital wallet aside from the ability to offer mobile payment services using the embedded NFC controller in iPhones.

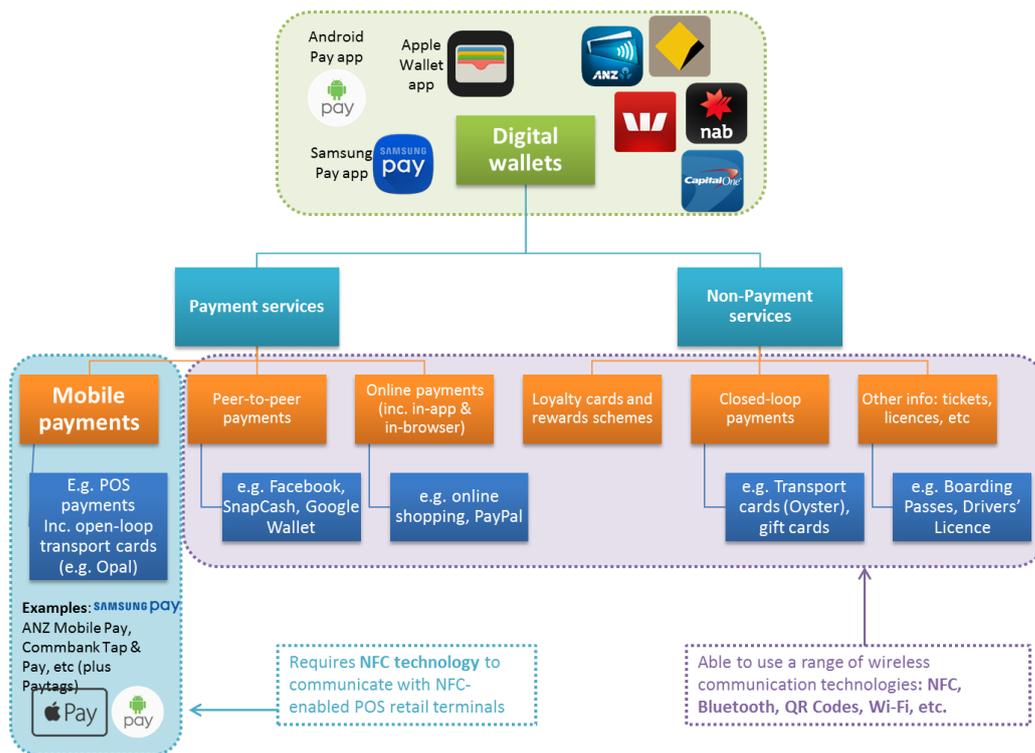
271. The Applicants submit that NFC access is required to enable real choice and real competition in the digital wallets available to consumers, which could otherwise 'compete with one another using features such as rewards points, specific offers, additional functions, facilities and services, etc'.³²⁴

272. As outlined in paragraph 73, a digital wallet refers to an app on a smartphone which performs a range of functions, including both payment-related functions and non-payment functions, such as storing loyalty cards or balance updates. Smartphones can also use a variety of wireless communications including Bluetooth, QR codes, mobile data networks, and wi-fi.

273. The following diagram sets out some of the key payment and non-payment functions discussed by the Applicants and whether it is possible to provide these functions without NFC access on iPhones.

274. This diagram demonstrates that lack of NFC access does not prevent issuers from offering features of digital wallets apart from NFC mobile payment services to their customers. For instance, processing rewards points does not necessarily require a phone to use NFC to interact with all payment terminals in Australia; rather, rewards information only needs to be transmissible to the much smaller group of participating merchants' payment terminals and can be implemented through whatever technology the merchants find to be most compatible with their payment facilities.

324 Applicants' submission received 9 February 2017, page 3.



275. The Applicants submit that, in the future with NFC access, their existing digital wallet apps on the Android platform, which are ‘largely mobile banking apps with basic NFC capability’, would be able to ‘become true mobile wallets combining payments with personal finance services, loyalty cards, identification and licensing credentials, transit cards, building and vehicle access and other applications’.³²⁵

276. However, the ACCC is not satisfied, on the information before it, that there would be increased competition and consumer choice in these non-payment features of digital wallets with NFC access compared with no NFC access, particularly in light of the Applicants’ existing ability to provide digital wallets on the iOS platform that compete with each other and with Apple Wallet regarding non-NFC-payment functions.

b) Ability to link to Apple Pay for the mobile payment service

277. The ACCC understands that issuers can also offer digital wallets with mobile payment capability by linking their own digital wallet with Apple Pay for the mobile payment service, though the Applicants do not consider that the ability to link to Apple Pay can substitute for NFC access because this results in a ‘limited and degraded version of the service’.³²⁶

278. The Applicants submit that accessing Apple Pay through an issuer wallet takes many more steps and substantially more time than just using Apple Pay on its own. The Applicants compare the five steps that are required to make a payment through the Capital One wallet with the simpler payment through Apple Wallet that requires ‘the single motion of placing a thumb on the Touch ID sensor and placing the iPhone near an NFC payment terminal’.³²⁷

325 Applicants’ submission received 9 February 2017, page 3.

326 Applicants’ submission received 9 February 2017, pages 13 and 15.

327 Applicants’ submission received 9 February 2017, pages 17-18.

279. To compare the user experience of making a payment on an issuer digital wallet using Apple Pay, the ACCC considers that the more appropriate comparison is with the process required for making a payment using an issuer digital wallet on an Android device. The experience in terms of the number of steps varies significantly depending on how the issuer digital wallet is designed, any additional authentication requirements, and the NFC configuration for the device. For example, making a mobile payment through the CommBank app on an Android device requires a similar number of steps³²⁸ as those outlined by the Applicants for making a mobile payment through the Capital One wallet.
280. Moreover, the benefit of making a mobile payment from within an issuer wallet derives from the additional banking-related functions that an issuer wallet may provide, such as balance updates or budgeting features. For a consumer to use functions before making the mobile payment, the consumer would have in any case needed to unlock the phone and launch the app.
281. Finally, as discussed in paragraphs 51 to 52, Apple Pay and Android Pay use different underlying technologies to make a mobile payment which result in some differences in user experience. Apple submits that the user experience in making a payment from Apple Pay within the Capital One wallet is almost identical to the user experience in making a payment from an issuer app with direct NFC access on an Android device.³²⁹ The Applicants disagree and maintain that using the Capital One wallet linked to Apple Pay introduces additional steps that ‘increase friction and reduce convenience’.³³⁰
282. After considering these positions, it appears to the ACCC that the option of using Apple Pay for the mobile payment service does allow the Applicants to compete in the supply of digital wallets on iPhones. The ACCC does not accept that the additional steps required to make a mobile payment from within an issuer wallet ‘can only be fatal’ to the prospects of an issuer wallet on the iOS platform as submitted by the Applicants,³³¹ nor that NFC access would necessarily allow issuers’ wallets to replicate exactly the features of Apple Pay.
283. Further, the Applicants argue that the Apple Wallet receives direct information about the transaction through the NFC interface, which disadvantages other digital wallets that do not receive this information.³³² The Applicants also argue that, as digital wallets become more widespread, NFC payment terminal software may be updated to provide and receive richer information through the NFC interface.³³³
284. Apple submits that the information from the NFC controller received by Apple Pay is primarily data related to communicating to the user that NFC communication has started and ended.³³⁴ Apple also states that the transaction data available to Apple Pay is also available to the issuer through the mobile data networks.³³⁵

328 CBA website, ‘How do I make a Tap & Pay purchase on an Android smartphone with NFC?’ <https://www.commbank.com.au/support/faqs/1192.html>.

329 Apple’s submission received 26 February 2017, page 8.

330 Applicants’ submission received 9 March 2017, page 3.

331 Applicants’ submission received 9 February 2017, page 20.

332 Applicants’ submission received 9 February 2017, page 19.

333 Applicants’ submission received 9 February 2017, page 23.

334 Apple’s submission received 26 February 2017, pages 8-9.

335 Apple’s submission received 26 February 2017, page 8.

285. The ACCC accepts that Apple Pay receives some transactional information through the NFC interface but notes that information regarding a transaction is readily available to issuer wallets over a mobile data connection. In addition, it is not clear to the ACCC that achieving NFC access would remove an issuer wallet's need for a mobile data connection to make a payment.

286. Therefore, the ACCC does not consider that the inability of issuer digital wallets to receive transactional information without a data connection is a material disadvantage that precludes the success of an issuer digital wallet; nor does the ACCC consider that the requirement for a data connection would necessarily be eliminated by an issuer wallet obtaining NFC access.

c) Risk of discrimination may limit any increase in competition in digital wallets

287. The ACCC is concerned that working against the likely increased competition in digital wallets arising from NFC access is the potential for competition to be distorted through the Applicants' commercial incentives, as providers of banking services, to favour their own digital wallets over multi-issuer digital wallets.

288. The issuers will have incentives to seek to have their cardholders use their own issuer digital wallets in order to maintain control over their customer relationships, to avoid any fees paid by multi-issuer digital wallets, and to avoid increased competition between issuers at point-of-sale brought about by multi-issuer digital wallets. The ACCC recognises the incentive for the Applicants to favour their own digital wallets exists with or without the proposed conduct. Nevertheless, these incentives may limit any increase in competition in digital wallets from NFC access.

289. In the draft determination, the ACCC was concerned that the Applicants may seek to charge fees for the use of digital wallets which are designed to discourage their cardholders from using Apple Pay. For instance, the Applicants could have set cardholder fees for using Apple Pay well in excess of the costs. The ability to pass through Apple Pay fees to cardholders has since been removed from the issues for collective bargaining.

290. Nevertheless, there are other potential ways for the Applicants to deter cardholders from using Apple Pay in favour of their own wallets. This could involve competition on the merits, but there is also scope for discrimination, for example, by limiting reward points for cardholders using Apple Pay.

291. Conversely, the Applicants submit that NFC access is likely to have the opposite effect: that is, NFC access would allow issuers and other mobile wallet providers to compete by offering incentives for customers to use particular wallets, resulting in public benefits to the customer, issuer, and the public as a whole.³³⁶

292. To demonstrate the effects of increased competition between issuer digital wallets and multi-issuer digital wallets, the Applicants provide several international examples of promotional offers available through SingTel Dash, Orange Cash, UOB Mighty, and ICICI Bank's Pockets app on the Android platform.

336 Applicants' submission received 9 March 2017, page 7.

293. It does not appear, however, that any of these examples involve direct competition between an issuer wallet and a multi-issuer digital wallet. Indeed, the Orange Cash, UOB Mighty, and ICICI Bank examples describe promotional offers in effect before any competing multi-issuer digital wallet had been launched in that country.

- a. SingTel Dash Pay uses a closed-loop payment system limited to around 20,000 specific retailers in Singapore (e.g. 7-Eleven, KFC, Pizza Hut, Singtel Shop, etc) and therefore does not directly compete with third party wallets that enable open-loop card payments at all retailers.³³⁷
- b. The offers made regarding Orange Cash are also available to payments made using Orange Cash cards loaded into the Apple Wallet and therefore do not constitute an incentive for consumers to use one wallet over another.³³⁸
- c. UOB Mighty's promotions were offered before Apple Pay and Android Pay were introduced in Singapore.³³⁹
- d. ICICI Bank's offers in India do not compete with any of Android Pay, Samsung Pay or Apple Pay, as none of these three have been launched yet in India.³⁴⁰

294. While the Applicants are no longer seeking to collectively bargain and boycott on the issue of pass-through of fees, the ACCC considers that this is not the only way in which the Applicants would be able to favour their own issuer digital wallets over multi-issuer digital wallets. For example, it is conceivable that an issuer could seek to limit the availability of a multi-issuer digital wallet to its cardholders by, for example, agreeing only in relation to a limited group of payment cards (e.g. only cards from one of the card schemes). An issuer could also seek to 'lock in' its customers to its own digital wallet and, while the cost of changing digital wallets may not be substantial relative to other switching costs faced by consumers when changing their provider of payment card services, efforts by issuers to entice their cardholders to use their issuer digital wallet would limit the submitted gains from increased competition in digital wallets.

d) Conclusion on increased competition in digital wallets

295. For the reasons outlined, the ACCC considers that NFC access is likely to result in a small public benefit from increased competition in digital wallets.

Increased innovation and investment in other applications of NFC technology

296. The Applicants submit that NFC access could lead to much broader applications of NFC technology than mobile payment services, including access control, ticketing, loyalty and discount coupons.³⁴¹ The Applicants consider that these other applications of NFC mean that 'there is a real and immediate public benefit in allowing an environment in

337 Fintechnews Singapore, 'Singtel and SCB's Dash Seeks to Reinvent How Singaporeans Pay, Save and Borrow Money', 4 November 2015: <http://fintechnews.sg/944/mobilepayments/singtel-scb-dash-seeks-reinvent-singaporeans-pay-save-borrow-money/>.

338 Applicants' submission received 9 March 2017, page 8.

339 Ibid.

340 Ibid.

341 Applicants' submission received 9 February 2017, pages 36-37 and Annexure B.

which these innovations can be given their best chance of success by providing access to the whole base of potential customers'.³⁴²

297. The Applicants argue that NFC access would allow Australian issuers, merchants and innovators to have the opportunity to continue developing products and services that address the specific needs of Australian consumers.³⁴³
298. However, as discussed in paragraphs 273 to 274, the broader applications of NFC technology to functions such as access control, ticketing, and loyalty rewards do not rely on interaction with the established NFC payments infrastructure in Australia. As these various functions may be performed through a variety of wireless communication technologies, including other types of radio-frequency identification (**RFID**) aside from NFC, there are a number of different ways for prospective suppliers to access their whole potential customer base. For instance, external RFID hardware is already commonly used in building passes and barcodes or QR codes are commonly used to redeem loyalty rewards and for boarding passes.
299. The ACCC is not satisfied that NFC access in iPhones is likely to lead to greater innovation and investment in these other applications or that these functions will inevitably move to NFC technology in the foreseeable future. Therefore, the ACCC does not accept this as a likely public benefit from the proposed conduct.

Increased adoption of mobile payments

300. The Applicants also argue that greater mobile payment adoption will lead to the public benefit of more efficient use of the existing Australian payments infrastructure.³⁴⁴ They argue that restricting mobile payments to occur only through Apple Pay may reduce mobile payment adoption and thereby reduce the public benefits that can be derived from the NFC payment infrastructure already paid for by Australian banks and merchants.³⁴⁵
301. The Applicants also submit that competition and choice between digital wallets across different smartphones is necessary to facilitate the adoption of mobile payments in Australia and fully realise the benefits and efficiencies from greater digital wallet adoption.³⁴⁶
302. Whilst the ACCC considers that NFC access is likely to increase competition in mobile payments and digital wallets, the ACCC is not satisfied this is likely to result in greater adoption of mobile payments.
303. In the likely future without the conduct, the Applicants will either each negotiate separately with Apple to make their cards available on Apple Pay or not at all. If a greater number of issuers sign up to Apple Pay through individual negotiations, this is also likely to increase adoption of mobile payments, particularly in the shorter term. Apple submits that collective bargaining risks leading to a further delay to the

342 Applicants' submission received 9 March 2017, page 4.

343 Applicants' submission received 9 March 2017, page 3.

344 Applicants' submission received 7 October 2016, page 25.

345 Applicants' submission received 7 October 2016, the attached Expert Report of Dr Susan Athey, page 31.

346 Applicants' submission received 7 October 2016, the attached Expert Report of Dr Susan Athey, page 9.

introduction of Apple Pay as a digital wallet for consumers whose payment cards are issued by one of the Applicants or another group member.³⁴⁷

304. In addition, as discussed, the emerging markets for digital wallets and mobile payment services are subject to rapid innovation and change, which is already producing an increasing variety of mobile payment services, mobile payment devices, and digital wallet apps. These developments will also affect the adoption of mobile payments in Australia and it is not clear that NFC access for the Applicants is likely to result in a greater adoption of mobile payments.
305. Given these uncertainties in how the relevant emerging markets will develop with and without the proposed conduct, the ACCC is not satisfied that it is likely that NFC access would result in greater adoption of mobile payments.
306. Lastly, contactless card payments using NFC technology are already well accepted and widely used in Australia. Consumers are also more likely to transition to mobile payments from contactless cards rather than consumers who are not aware of or have never made a contactless payment.³⁴⁸ The ACCC is therefore not satisfied that any slower adoption of mobile payments is likely to lead to less intensive use of the contactless payment infrastructure in Australia.
307. Therefore, the ACCC is not satisfied that NFC access is likely to result in public benefits from increased adoption of mobile payments or a more efficient use of the existing Australian payments infrastructure.

Improvements in information

308. The ACCC considers that there is likely to be a small public benefit from the proposed conduct making it more likely that Group Participants obtain better information from Apple and thereby may make more informed decisions as to whether to enter into an agreement with Apple and on what terms.
309. Information asymmetry occurs when one party to an exchange has incomplete information about the price and quality of the good or service, which results in that party not being fully informed and able to make rational choices and decisions on price, quantity and quality.³⁴⁹
310. The Applicants argue that non-disclosure agreements prevent issuers from disclosing any information about ongoing or completed negotiations and that it will be particularly difficult for issuers to negotiate with Apple on particular terms without knowing the outcomes of negotiations between Apple and other issuers.³⁵⁰ Further, the Applicants argue that Apple has shown an unwillingness to modify the terms of its non-disclosure agreement.³⁵¹

347 Apple's submission received 26 August 2016, page 7, section 2.3.

348 See paragraph 209, citing the Visa-RFi Group Australian Payments Report, '*The changing payments behaviour of Australian consumers and the impact on banking relationships*', June 2015, page 24: <https://www.visa.com.au/content/dam/VCOM/regional/ap/australia/global-elements/Documents/research-and-trends-visa-rfi-australian-payments-report.pdf>.

349 ACCC, '*Guide to collective bargaining notifications*', page 34: <https://www.accc.gov.au/system/files/Guide%20to%20collective%20bargaining%20notifications.pdf>.

350 Applicants' initial submission in support of the applications for authorisation received 26 July 2016, page 43.

351 Applicants' submission received 21 November 2016, page 3.

311. The ACCC does not consider that non-disclosure on Apple's negotiations with the Applicants' competitors creates any information asymmetry on the price or quality of Apple Pay. However, the collective bargaining is likely to place the Applicants in a better position to obtain additional information regarding the technical operation of Apple Pay and thereby make more informed decisions on whether to participate.
312. The ACCC notes, however, that such information flow is also likely to largely occur if each Applicant negotiated with Apple individually although perhaps not to the same extent.

Facilitation of market dynamics

313. The Applicants submit that the proposed conduct is directed towards increasing competition by increasing their ability, and the ability of others, to supply digital wallet services to all potential customers.³⁵²
314. The ACCC does not consider that there are public benefits over and above the likely public benefits from increased competition in mobile payment services, as already discussed.

Transaction cost savings

315. The Applicants submit that the collective negotiations will result in a reduction in the transaction costs of negotiating with Apple in relation to the relevant issues, which are likely to be significant, as any negotiations concerning these issues are likely to be protracted and difficult.³⁵³
316. However, the Applicants have also submitted that they are under intense pressure to participate in Apple Pay and wish to conclude collective negotiations as quickly as possible.³⁵⁴ Moreover, the scope of collective negotiations is limited to the relevant issues, which means that each participant will have to separately negotiate the other terms of the contract.
317. Therefore, the ACCC is not satisfied that the proposed conduct is likely to result in net transaction cost savings.

App Store access

318. As outlined in paragraph 9, the scope of the issues for collective negotiation will include App Store access.³⁵⁵
319. The Applicants submit that collective bargaining on this issue is necessary to ensure that any NFC access granted will not be undermined by unreasonable restrictions on access to the App Store.³⁵⁶ In support of this argument, the Applicants note that Apple has rejected apps for duplicating iPhone features or functionality (such as calls or podcasts) and has also recently rejected a Samsung app.

352 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 43.

353 Applicants' submission in support of the applications for authorisation received 26 July 2016, page 44.

354 Applicants' submission received 7 October 2016, page 3.

355 Applicants' letter to the ACCC received 27 October 2016, page 1.

356 Applicants' submission received 9 February 2017, page 33.

320. However, the ACCC is aware of numerous other apps on Apple's App Store provided by third parties that duplicate iPhone features such as calls or podcasts.

321. In the absence of any other supporting arguments demonstrating a need for collective negotiation on reasonable terms and conditions for App Store access, the ACCC does not consider that collective negotiation and boycott on this issue is likely to result in public benefits.

Consideration of public detriments

322. The CCA does not define what constitutes a public detriment and the ACCC adopts a broad approach. This is consistent with the Tribunal which has defined it as:

*...any impairment to the community generally, any harm or damage to the aims pursued by the society including as one of its principal elements the achievement of the goal of economic efficiency.*³⁵⁷

323. As noted, the ACCC has considered whether if the Applicants are successful in negotiating NFC access, that access is likely to result in public detriments.

324. Having regard to the submissions of the Applicants and interested parties, the ACCC considers that NFC access and the collective negotiations more generally are likely to result in:

- a. a significant public detriment from distorting competition between mobile operating systems
- b. a significant public detriment from distorting competition in the emerging market for mobile payment devices
- c. some public detriment from reducing competition between payment cards, with the potential for the detriment to be significant, and
- d. a small public detriment from delaying the expansion of Apple Pay in Australia.

Distortion in competition in mobile operating systems

325. The ACCC considers that NFC access as a result of the proposed conduct is likely to result in a significant public detriment from distorting competition between mobile operating systems by:

- a. affecting platform competition between the iOS and Android operating systems, and
- b. altering the user experience of Apple's mobile payment service.

326. First, if the Applicants are successful in obtaining NFC access, this would affect Apple's current integrated hardware-software strategy for mobile payments and operating systems more generally, thereby impacting how Apple competes with Google. In particular, NFC access is likely to involve modifications to Apple's software or hardware that lessen the degree of differentiation between the iOS platform and the Android platform.

357 *Re 7-Eleven Stores* (1994) ATPR 41-357 at 42,683.

327. Second, modifications to the iOS platform in order to accommodate multiple mobile payment services having the ability to access the NFC controller is likely to also alter the user experience of Apple Pay on the iOS platform.
328. As noted, Apple's iOS operating system is a differentiated offering that competes globally against other mobile operating systems, particularly Google's Android operating system. A key differentiating feature of iOS and Android is that the iOS operating system software is integrated with the device hardware, whereas the Android operating system software is supplied separately to the device hardware.
329. One of the features of mobile operating systems relates to the mobile payment services and digital wallets that are available. Apple and Android offer different approaches to providing mobile payment services. As detailed at paragraphs 51 and 52, Apple employs a hardware-based model using a Secure Element for making mobile payments in competition with Android's software-based model using HCE to enable mobile payments.
330. The Applicants currently have NFC access on Android phones and are seeking a similar level of NFC access on iPhones. If the Applicants are successful in obtaining this access, this is likely to involve modifications to Apple's software or hardware that result in the iOS operating system adopting some of the characteristics of its main competitor, the Android operating system.
331. For instance, this may involve more steps to manually set up mobile payments or switch between default wallets or require consumers to take more steps to make a mobile payment with the same level of security and authentication. These changes are likely to result in a different approach to tokenisation of mobile payments and could affect the security or privacy of mobile payments on the iOS platform.
332. Apple submits that it has designed Apple Pay 'to provide the required level of security with tight integration of hardware, software, and services' and that 'Apple does not provide banks access to the NFC radio because doing so would undermine the security our customers expect when using Apple devices to make payments'.³⁵⁸ Submissions from several individual consumers voice similar concerns.³⁵⁹
333. The Applicants dispute that providing access to the iPhone's NFC functionality could undermine the security of Apple Pay or otherwise decrease its competitiveness, because:³⁶⁰
- a. Apple's claims are not supported by facts, and
 - b. other technology companies offer access to NFC without compromising security.
334. Apple counters that 'Android devices, which provide open access to their NFC controllers to banks, have been shown to be susceptible to external attacks that can compromise the customer's card information',³⁶¹ to which the Applicants have responded that:

358 Apple's submission received 26 August 2016, page 11, section 4.2.

359 See, e.g. submission from Brian Tran's submission received 13 September 2016, submission from David Thornton's submission received, 30 September 2016, submission from Wayne Pullbrook's submission received 27 August 2016.

360 Applicants' submission received 7 October 2016, pages 28-29.

361 Apple's submission received 26 August 2016, page 11, section 4.2.

*While Apple does not go so far as to say that Android devices are susceptible to these attacks because they provide access to their NFC controllers, it invites the ACCC to draw such a conclusion. While such a potential vulnerability does appear to have been demonstrated in highly controlled conditions, it is not at all clear that the vulnerability Apple is referring to has anything to do with the provision of third party access to Android's NFC functionality.*³⁶²

335. The Applicants' response was followed by submissions from consumers noting the perceived security advantages of Apple Pay over alternative mobile payment services that permit greater access to hardware.³⁶³ The Applicants provided a further submission reiterating their view that allowing NFC access does not raise particular security concerns.³⁶⁴

336. The Applicants dispute that providing access to the iPhone's NFC functionality could undermine the security or user experience of Apple Pay or otherwise decrease its competitiveness.³⁶⁵ The Applicants note that this has not been the case on Android devices and submit that they will seek to maintain a seamless user experience on iPhones.³⁶⁶

337. The Applicants argue that Apple could create a software interface similar to the one in Android devices to allow the Applicants' apps to access the NFC controller embedded in iPhones, noting that:³⁶⁷

- a. the Applicants do not require direct access to the NFC hardware of iPhones, but through a software interface created by Apple that would be expected to meet Apple's own security standards
- b. Apple should be able to expand its existing governance mechanism that covers Apple Pay to cover other third party applications, as in Android devices
- c. the availability of issuer digital wallets would not compromise the user experience, because consumers with iPhones could still choose to use Apple Pay if they wished.

338. The Applicants submit that 'it is difficult to see how this would be a significant overhaul compared to the other changes to iOS that are made every year, which frequently provide access or increased access to a range of hardware features'.³⁶⁸

339. In response, Apple submits that it has adopted a global approach to the Apple Pay platform as an integrated service because it offers a simple, secure and private way for customers to make payments. It submits that it will not change this approach for Australia because its global position with respect to security and privacy of customer data is in the interests of Apple's users. It also submits that it is unnecessary for Apple to do so, because the Apple Pay platform enables the Applicants the options described earlier in which to offer digital wallets on iPhones.

340. Apple also submits that, in addition to posing serious security and privacy concerns, providing direct NFC access would undermine the simplicity and ease of use of the

362 Applicants' submission received 7 October 2016, page 29.

363 See, e.g., Dr David Glance's submission received 9 September 2016; John Montagu's submission received 18 October 2016, Brian Tran's submission received 13 September 2016.

364 Applicants' submission received 11 November 2016, pages 21-25.

365 Applicants' submission received 7 October 2016, pages 28-29.

366 Applicants' submission received, 9 February 2017, page 7, p7.

367 Applicants' submission received 7 October 2016, pages 29-32.

368 Applicants' submission received 7 October 2016, page 32.

payment and non-payment functions of Apple Wallet. Apple submits that this simple user experience is critical for consumers and any friction in that process, such as the need to manually select which app has control over the NFC radio, would inhibit consumer adoption.³⁶⁹ Apple submits that the Applicants already have the option to offer a seamless payment experience by taking advantage of the Apple Pay platform on iPhones.

341. The ACCC accepts the view of both the Applicants and interested parties (including Apple) that mobile payments are generally safer than card-based payments due to the use of tokenisation and other security measures possible on a smart device. The ACCC does not consider it necessary to form a view on the relative security of using a Secure Element over HCE, but notes that the two approaches represent competing models to the provision of mobile payment services, which may each come with distinct advantages and disadvantages.

342. The ACCC is therefore concerned that NFC access is likely to result in a significant public detriment from distorting competition between mobile operating systems because, if the Applicants were successful in securing NFC access, this is likely not only to lessen the degree of Apple's differentiation from the Android platform but also to alter the consumer experience offered by Apple's competitively differentiated iOS platform.

Distortion of competition in mobile payment devices

343. The ACCC considers that NFC access is likely to result in a significant public detriment from a distortion in competition in mobile payment devices by interfering in the incentives for innovation currently occurring in the relevant markets for mobile payment devices.

344. The Applicants submit that smartphones are far more likely to be 'the next significant form factor that customers use to interact with the NFC payment infrastructure than any alternative that is currently available or planned'.³⁷⁰

345. Apple submits, however, that the popularity of iPhones and other smartphones is not a relevant consideration in these applications for authorisation.³⁷¹ Apple notes that NFC capable iPhones have only been available for two years and that sales 'fluctuate significantly according to the quarter in question including because of the release cycles of new models by different suppliers'.³⁷²

346. As outlined in paragraphs 53-71, the market for mobile payment devices exhibits a very high level of innovation and growth, with large international and domestic participants from high-technology industries producing a variety of differentiated devices with different functionalities and targeting different demographics.

347. Although Apple is one such participant, the ACCC does not consider it to have a monopoly on the supply of devices capable of making mobile payments. Apple devices compete closely with other mobile payment devices that use the Android operating system which incorporate Android Pay, Samsung Pay or issuer digital wallets. In addition to Apple, suppliers of NFC-capable mobile devices include Alcatel, BlackBerry,

369 Apple's submission received 26 October 2016, pages 4-6.

370 Applicants' submission received 9 March 2017, page 5.

371 Apple's submission received 26 October 2016, page 8.

372 Apple's submission received 26 October 2016, page 8.

HTC, Huawei, LG Electronics, Microsoft, Motorola, Nokia, OPPO, Samsung and Sony.³⁷³

348. Apple also argues that ‘there is nothing preventing the banks from developing their own alternative mobile payment hardware’.³⁷⁴ Although the ACCC notes that significant costs are likely to be incurred for issuers to develop their own devices, there may also be opportunities for issuers to provide alternative payment devices in partnership with retailers or with one of the numerous mobile device manufacturers. For example, Barclays Bank has partnered with Topshop in the UK to produce a range of accessories with NFC capability; similarly, MasterCard has announced a partnership with Coin to bring NFC payments to fitness trackers by Moov, Atlas Wearables and Omate.³⁷⁵
349. Lastly, digital wallet apps on a smartphone may be linked to a separate NFC-capable device or NFC chip to make mobile payments. For instance, fitness trackers and smart watches running Android Wear 2.0 may be paired with digital wallet apps that are compatible with both the Android and iOS smartphone operating systems. Westpac has recently announced that it will launch a smart wristband to enable its cardholders to make mobile payments.³⁷⁶
350. The increasing variety of NFC-enabled devices or accessories that may be operated via smartphone apps on either Android or the iOS operating system is further evidence of the dynamic competition and high levels of innovation in the emerging mobile payments market.
351. If Apple opens up access to its NFC controller as a result of the proposed conduct, this is likely to impact competition in mobile payments and digital wallets, as discussed, which in turn is likely to impact competition between mobile payment devices by artificially directing the development of these emerging markets in mobile payment services to using the NFC controller in smartphones.
352. The ACCC therefore considers that NFC access is likely to distort competition in mobile payment services by creating a bias in these emerging markets towards the use of the NFC controller in smartphones. This is likely to discourage or impede the innovations currently occurring in the development of various different devices for mobile payments or have other unforeseen impacts on the level of competition in these markets and their future development in Australia.

Reduction in competition in payment cards

353. The ACCC considers that NFC access is likely to result in some public detriment from reducing competition between payment cards at the point-of-sale by inhibiting competition between issuers that may be facilitated through Apple Wallet and other multi-issuer digital wallets. The ACCC considers that there is potential for this detriment to be significant.

373 Apple’s submission received 26 October 2016, page 8.

374 Apple’s submission received 26 October 2016, page 8.

375 See above Mobile payment devices section at paragraphs 53 to 71.

376 Australian Financial Review, ‘Westpac raises tech stakes with wearables and social messaging payments’, 20 March 2017: <http://www.afr.com/technology/apps/business/westpac-raises-tech-stakes-with-wearables-and-social-messaging-payments-20170315-guylwj>.

354. Apple submits that even if it did agree with the Applicants and allowed open access to the NFC controller on iPhones, it is not necessarily the case that this will increase competition and consumer choice in digital wallets to iPhone users, because:
- a. While Android Pay and Samsung Pay already appear to provide the Applicants with everything they are seeking in this application, none of the major Applicants (CBA, NAB, Westpac) have allowed their customers access to Android Pay despite it having been launched several years ago, or have only offered Android Pay to a subset of their customers. The ACCC notes that Westpac has since agreed to offer Android Pay to its cardholders.
 - b. The only plausible explanation for the Applicants' behaviour is that they are not interested in promoting competition in mobile payments, but instead prefer a situation where the only digital wallets available to customers in Australia are the Applicants' own digital wallets that only provide access to their own respective payment cards.
 - c. If this outcome is repeated for iPhones, iPhone users with a particular payment card wishing to make payments using a digital wallet will have one choice, the digital wallet supplied by their issuer.
 - d. Apple further submits that such an outcome will inhibit competition between payment card issuers that multi-issuer digital wallets such as Apple Wallet will likely cause. Apple notes that multi-issuer digital wallets have the capacity to permit consumers to rapidly and simply switch between payment cards at point-of-sale. This ease of switching is likely to promote competition between payment card issuers.³⁷⁷
355. The Applicants responded to this issue, submitting that multi-issuer digital wallets do not provide significantly more competition at the point-of-sale than already exists and also that their customers are demanding services such as Apple Pay. In any event, the Applicants submit that they are in negotiations to offer multi-issuer wallets. The Applicants submit that customers can already easily switch between the plastic cards in their physical wallets, and will be able to easily switch between differentiated mobile payment apps on their mobile devices.³⁷⁸
356. In a further submission, Apple submits that Apple Pay increases competition from smaller issuers by allowing them to include their payment cards alongside payment cards from larger issuers in Apple Wallet. Apple also submits that because consumers can easily switch payment cards in Apple Wallet, card issuers can entice consumers with discounts and incentives.³⁷⁹
357. In response, the Applicants refute Apple's claims. The Applicants submit that most consumers make most of their payments with the one payment card and do not often switch between cards. The Applicants do not consider that they have an incentive to favour their own wallets over multi-issuer wallets.³⁸⁰
358. The Applicants have submitted that the collective negotiation is necessarily predicated on the Applicants' participation in Apple Pay.³⁸¹

377 Apple's submission received 26 October 2016, page 3.

378 Applicants' further submission summarising net public benefits and responding to Apple's 26 October 2016 submission, received 213 November 2016, page 4 .

379 Apple's submission received 31 January 2017, pages p5-9.

380 Applicants' submission received 21 November 2016, page 4.

381 Applicants' submission received 21 November 2016, page 4.

359. The ACCC accepts that it is likely that Apple would require the Applicants to make their payment cards available on Apple Wallet in the event of granting NFC access and notes that Westpac's cards are said to be soon available on Android Pay. However, as discussed in paragraphs 287-294, the ACCC considers that issuers have incentives to favour their own digital wallets over multi-issuer digital wallets. The incentives of issuers to favour their own wallets are likely to have the effect of reinforcing the use of one payment card as a default card; whereas multi-issuer digital wallets would not have the effect of the choice of wallet determining the default card.

360. The use of multi-issuer digital wallets would put more pressure on issuers to compete in the provision of payment card services. Multi-issuer digital wallets such as Apple Wallet and Android Pay are likely to increase competitive tension between payment card issuers by increasing the ease of consumer switching. Multi-issuer digital wallets are also likely to directly facilitate competition between payment cards at the point-of-sale by allowing issuers to offer competing promotions to consumers at the time of purchase.

361. To the extent NFC access would bias the development of issuer digital wallets over multi-issuer digital wallets, these potential benefits are likely to be lost.

Impact on issuers not part of the group

362. The ACCC does not consider that the proposed conduct is likely to result in public detriment from its impact on issuers not part of the bargaining group.

363. The ability to join the bargaining group is unlikely to assist issuers that have already signed up for Apple Pay. The proposed conduct is also unlikely to disadvantage issuers not already signed up to Apple Pay, as these issuers can join the group at any time.

364. ANZ, Amex, ING, Macquarie Bank and the smaller issuers who are clients of Cuscal may experience some disadvantage for the length of their contracts with Apple, but would likely be able to leverage off any changes Apple makes to its standard approach on NFC access and App Store access in future contract negotiations and are likely to benefit from being the first issuers to offer Apple Pay in Australia.

Potential for collusion between issuers

365. The ACCC does not consider that the proposed conduct is likely to result in public detriment from the risk of collusion between issuers in the bargaining group.

366. The collective bargaining conduct involves coordination between three of the four major banks which are otherwise close competitors in a relatively concentrated banking market.³⁸² Some interested parties, such as the South Australian Small Business Commissioner and some individuals, consider that the 'big banks' should not be allowed to create a cartel (for any purpose), noting that they are very large players with significant market power in the banking sector. Apple also argues that the risk of collusion between the Applicants is significant.

367. However, the Applicants submit that the proposed conduct relates only to the group's negotiations with Apple and only on the specific issues identified, and any information or coordination outside of this would not be covered by the authorisation. It is not intended that the negotiations be used to decide on the specific contractual terms that would

382 Stephen King, Stephen P, 'Collective Bargaining By Business: Economic and Legal Implications', UNSW University of New South Wales Law Journal, Volume 36(1), p. 124, citing European Commission guidelines.

apply with respect to NFC access or App Store access. The Applicants have also noted that information protocols and ring-fencing of negotiations will apply to prevent anti-competitive information exchange.

368. If the proposed conduct enhances the potential for coordinated (rather than competitive) responses across the market for payment cards more generally and information sharing beyond that specifically necessary to negotiate on the relevant issues, this could result in reduced competition in the markets in which the Applicants compete, including the issuer market generally as well as digital wallets and mobile payment services specifically. To the extent that this occurs, this would give rise to public detriment, including detriment to consumers, by causing inefficiency that leads to higher prices, reduced output and reduced quality.
369. On balance, the ACCC considers that although there may be the potential for tacit collusion beyond the proposed conduct, for example in relation to each Applicant's approach to its mobile payment offerings, there is not sufficient evidence before the ACCC that suggests such coordination is likely.

Delay in access to Apple Pay

370. The ACCC considers that there is likely to be a small public detriment from delaying the availability of Apple Pay to consumers for the period of the authorisation.
371. Consumer uptake and consumer choice in digital wallets in Australia is expanding (e.g. issuer digital wallets, and multi-issuer digital wallets Android Pay and Samsung Pay), and Apple Pay appears to be an important new entrant. Delays caused by the proposed conduct may mean that Apple Pay is not available to many bank customers at a critical time for the launch of digital wallets in Australia. For some Apple customers, the ability to make contactless payments on their smart device is very important. At present, Apple Pay is the only mechanism available on Apple devices able to make mobile payment through NFC, and only for ANZ or Amex cardholders (and more recently ING, Macquarie Bank and cardholders of Cuscal members). Some Apple customers might have a strong preference for Apple Pay in particular; for example, consumers who value the interface offered by Apple's own apps. Any delay is likely to be of detriment to this group of consumers.
372. While some consumers have indicated in their submissions that they are willing and able to switch to a different issuer (e.g. Amex, ANZ, ING, Macquarie Bank or one of the smaller financial institutions represented by Cuscal) or to switch to a different mobile device,³⁸³ there are generally significant costs associated with such switching. If a consumer is switching payment cards in order to access Apple Pay's mobile payment services, they are more likely to switch to a card on which they make most of their payments, which is more likely to be linked with key transaction accounts and rewards programs. In addition, it is possible that a consumer may give up some financial or non-financial benefits in switching from their preferred issuer to a different one in order to have the ability to make mobile payments via Apple Pay.
373. The proposed conduct sought would allow the Group Participants to agree not to sign up to Apple Pay for the next 18 months and, given the differentiating characteristics of Apple Pay and other mobile payment services, a delay in being able to access Apple

383 See, e.g. Joel Hinchliffe's submission received 6 September 2016; Jason Discount's submission received 17 August 2016; Trevor Long's submission received 26 August 2016.

Pay functionality during the proposed conduct is likely to result in a small public detriment in the form of decreased choice for affected consumers.

Removal of the issue of pass-through of fees

374. Since the ACCC's draft determination, the Applicants have amended their application so that authorisation is no longer sought for collective negotiation for the ability to pass through Apple fees to their cardholders. The ACCC had considered that there was likely to be benefit from letting market forces determine whether issuers pass on the Apple Pay fees to consumers (as opposed to a contractual restriction imposed by Apple), and by how much and that the threat of such pass through would be likely to constrain Apple in setting the size of these fees. This benefit no longer applies to the conduct.

375. However, the ACCC also considered that there was a risk that allowing issuers to pass through fees may provide the Applicants with the scope to discriminate against Apple Pay and Apple Wallet in favour of their own digital wallets in a way which would distort competition. This particular risk in relation to fee pass through is also removed.

Balance of public benefit and detriment

376. In general, the ACCC must not grant authorisation unless it is satisfied that, in all the circumstances, the proposed conduct is likely to result in a public benefit, and that public benefit will outweigh any likely public detriment, including any lessening of competition.

377. For the reasons outlined in this determination, while the ACCC considers that there are a number of public benefits likely to arise from the proposed conduct, with one being significant, they are outweighed by a number of significant and other detriments. On balance, therefore, the ACCC is not satisfied that the proposed conduct is likely to result in public benefits that would outweigh likely significant public detriments or that the proposed conduct is likely to result in such a benefit to the public that it should be allowed to take place.

378. Accordingly, the ACCC has decided not to grant authorisation.

Determination

The applications

379. Application A91546 was made using a Form A, under subsections 88(1) and 88(1A) of the CCA, and application A91547 was made using a Form B, under subsections 88(1) and 88(1A) of the CCA. Authorisation is sought for the Group Participants to engage in limited collective negotiations and a limited collective boycott with respect to negotiations with Apple on NFC access and App Store access.

380. Authorisation is sought as the proposed conduct may contain a cartel provision or may have the purpose or effect of substantially lessening competition or be an exclusionary provision within the meaning of section 45 of the CCA.

The net public benefit test

381. The ACCC considers that a number of benefits are likely to arise from the proposed conduct – namely a significant benefit from an increase in competition in mobile payment services, and small benefits from each of an increase in competition in digital wallets and a reduction in information asymmetry. However, the ACCC also considers that a number of detriments are likely to arise from the proposed conduct – namely significant detriments from distortions in competition in both mobile operating systems and mobile payment devices, some detriment from reduced competition in payment card services and a small detriment from a delay in access to Apply Pay.
382. For the reasons outlined in this determination, the ACCC is not satisfied, pursuant to sections 90(5A), 90(5B), 90(6) and 90(7) of the CCA, that in all the circumstances the conduct for which authorisation is sought is likely to result in a public benefit that would outweigh any likely detriment to the public constituted by any lessening of competition arising from the proposed conduct.
383. For the reasons outlined in this determination the ACCC is not satisfied, pursuant to section 90(8) that the conduct for which authorisation is sought is likely to result in such a benefit to the public that the proposed conduct should be allowed to take place.
384. The ACCC has therefore decided to **deny** authorisation to applications A91546 and A91547.
385. This determination is made on 31 March 2017.

Attachment A - Public benefit tests in CCA

Subsections 90(5A) and 90(5B) provide that the ACCC shall not authorise a provision of a proposed contract, arrangement or understanding that is or may be a cartel provision, unless it is satisfied in all the circumstances that:

- the provision, in the case of subsection 90(5A) would result, or be likely to result, or in the case of subsection 90(5B) has resulted or is likely to result, in a benefit to the public; and
- that benefit, in the case of subsection 90(5A) would outweigh the detriment to the public constituted by any lessening of competition that would result, or be likely to result, if the proposed contract or arrangement were made or given effect to, or in the case of subsection 90(5B) outweighs or would outweigh the detriment to the public constituted by any lessening of competition that has resulted or is likely to result from giving effect to the provision.

Subsections 90(6) and 90(7) state that the ACCC shall not authorise a provision of a proposed contract, arrangement or understanding, other than an exclusionary provision, unless it is satisfied in all the circumstances that:

- the provision of the proposed contract, arrangement or understanding in the case of subsection 90(6) would result, or be likely to result, or in the case of subsection 90(7) has resulted or is likely to result, in a benefit to the public; and
- that benefit, in the case of subsection 90(6) would outweigh the detriment to the public constituted by any lessening of competition that would result, or be likely to result, if the proposed contract or arrangement was made and the provision was given effect to, or in the case of subsection 90(7) has resulted or is likely to result from giving effect to the provision.

Subsection 90(8) states that the ACCC shall not:

- make a determination granting:
 - i. an authorisation under subsection 88(1) in respect of a provision of a proposed contract, arrangement or understanding that is or may be an exclusionary provision; or
 - ii. an authorisation under subsection 88(7) or (7A) in respect of proposed conduct; or
 - iii. an authorisation under subsection 88(8) in respect of proposed conduct to which subsection 47(6) or (7) applies; or
 - iv. an authorisation under subsection 88(8A) for proposed conduct to which section 48 applies;

unless it is satisfied in all the circumstances that the proposed provision or the proposed conduct would result, or be likely to result, in such a benefit to the public that the proposed contract or arrangement should be allowed to be made, the proposed understanding should be allowed to be arrived at, or the proposed conduct should be allowed to take place, as the case may be; or

- make a determination granting an authorisation under subsection 88(1) in respect of a provision of a contract, arrangement or understanding that is or may be an exclusionary provision unless it is satisfied in all the circumstances that the provision has resulted, or is likely to result, in such a benefit to the public that the contract, arrangement or understanding should be allowed to be given effect to.