Form A

Commonwealth of Australia

Competition and Consumer Act 2010 — subsections 88 (1A) and (1)

EXCLUSIONARY PROVISIONS AND ASSOCIATED CARTEL PROVISIONS: APPLICATION FOR AUTHORISATION

To the Australian Competition and Consumer Commission:

Application is hereby made under subsection(s) 88 (1A)/88 (1) of the *Competition and Consumer Act 2010* for an authorisation:

- to make a contract or arrangement, or arrive at an understanding, a provision of which would be, or might be, a cartel provision within the meaning of Division 1 of Part IV of that Act and which would also be, or might also be, an exclusionary provision within the meaning of section 45 of that Act.
- to give effect to a provision of a contract, arrangement or understanding that is, or may be, a cartel provision within the meaning of Division 1 of Part IV of that Act and which is also, or may also be, an exclusionary provision within the meaning of section 45 of that Act.
- to make a contract or arrangement, or arrive at an understanding, where a provision of the proposed contract, arrangement or understanding would be, or might be, an exclusionary provision within the meaning of section 45 of that Act.
- to give effect to a provision of a contract, arrangement or understanding where the provision is, or may be, an exclusionary provision within the meaning of section 45 of that Act.

1. Applicant

(a) Name of Applicants:

A91546

- Bendigo and Adelaide Bank;
- Commonwealth Bank of Australia (**CBA**);
- National Australia Bank (**NAB**); and
- Westpac Banking Corporation (**Westpac**).

This application is to be read and determined together with the submission supporting this application (**Submission**), which is lodged with this form.

(b) Description of business carried on by applicants:

The provision of banking and financial services including the issuing of credit and debit cards and the provision of mobile banking and payment services.

For more detail, please refer to the Submission.

(c) Address in Australia for service of documents on the applicant:

Gilbert + Tobin

L35, Tower Two, International Towers Sydney

200 Barangaroo Ave

Barangaroo NSW 2000.

Attention: Paula Gilardoni
Tel: 02 9263 4187
Fax: 02 9263 4111
Email: pgilardoni@gtlaw.com.au

2. Contract, arrangement or understanding

(a) Description of the contract, arrangement or understanding, whether proposed or actual, for which authorisation is sought:

The applicants seek authorisation on behalf of themselves and potentially other credit and debit card issuers to engage in limited collective negotiation with providers of third-party mobile wallet services on conditions relating to competition, best practice standards, and efficiency and transparency. The applicants also seek authorisation to enter into a limited form of collective boycott in relation to a third-party mobile wallet provider while collective negotiations with that provider are ongoing.

For more detail, please refer to the Submission.

(b) Description of those provisions of the contract, arrangement or understanding described at 2 (a) that are, or would or might be, exclusionary provisions and (if applicable) are, or would or might be, cartel provisions:

The limited collective negotiation and limited collective boycott proposed might be considered to be exclusionary provisions to the extent that they have the purpose of preventing, restricting or limiting the acquisition of mobile wallet or mobile payment services from particular third-party wallet providers in particular circumstances or on particular conditions; and might be considered to be cartel provisions to the extent that they have the purpose of preventing, restricting or limiting the supply of any services to third party mobile wallet providers during the period of any collective negotiation.

(c) Description of the goods or services to which the contract, arrangement or understanding (whether proposed or actual) relate:

Mobile wallet and mobile payment services.

(d) The term for which authorisation of the provision of the contract, arrangement or understanding (whether proposed or actual) is being sought and grounds supporting this period of authorisation:

Authorisation is being sought for three years.

The grounds supporting this period of authorisation are set out in the Submission.

3. Parties to the proposed arrangement

(a) Names, addresses and descriptions of business carried on by other parties or proposed parties to the contract or proposed contract, arrangement or understanding:

- Bendigo and Adelaide Bank Limited, The Bendigo Centre, Bendigo Vic 3552;
- Commonwealth Bank of Australia (**CBA**), Ground Floor, Tower 1, 201 Sussex Street, Sydney NSW 2000;

- National Australia Bank Limited (**NAB**), Level 1, 800 Bourke Street, Docklands Vic 3008; and

- Westpac Banking Corporation (**Westpac**), 275 Kent Street, Sydney NSW 2000.

The arrangements may be extended to other card issuers who wish to participate in the collective negotiation. All parties or proposed parties engage in businesses that include the issuing of credit and debit cards and the provision of or participation in mobile wallet and mobile banking services.

(b) Names, addresses and descriptions of business carried on by parties and other persons on whose behalf this application is made:

See 3(a) above.

4. Public benefit claims

(a) Arguments in support of application for authorisation:

Please see Submission.

(b) Facts and evidence relied upon in support of these claims:

Please see Submission.

5. Market definition

Provide a description of the market(s) in which the goods or services described at 2 (c) are supplied or acquired and other affected markets including: significant suppliers and acquirers; substitutes available for the relevant goods or services; any restriction on the supply or acquisition of the relevant goods or services (for example geographic or legal restrictions):

Please see Submission.

6. Public detriments

(a) Detriments to the public resulting or likely to result from the contract arrangement or understanding for which authorisation is sought, in particular the likely effect of the contract arrangement or understanding, on the prices of the goods or services described at 2 (c) and the prices of goods or services in other affected markets:

Please see Submission.

(b) Facts and evidence relevant to these detriments:

Please see Submission.

7. Contracts, arrangements or understandings in similar terms

(a) This application for authorisation may also be expressed to be made in relation to other contracts, arrangements or understandings or proposed contracts, arrangements or understandings, that are or will be in similar terms to the abovementioned contract, arrangement or understanding:

(b) Is this application to be so expressed?

No.

(c) If so, the following information is to be furnished:

(i) description of any variations between the contract, arrangement or understanding for which authorisation is sought and those contracts, arrangements or understandings that are stated to be in similar terms:

N/A

(ii) Where the parties to the similar term contract(s) are known — names, addresses and descriptions of business carried on by those other parties:

N/A

(iii) Where the parties to the similar term contract(s) are not known — description of the class of business carried on by those possible parties:

N/A

8. Joint Ventures

(a) Does this application deal with a matter relating to a joint venture (See section 4J of the *Competition and Consumer Act 2010*)?

No.

(b) If so, *are* any other applications being made simultaneously with this application in relation to that joint venture?

Not applicable.

(c) If so, by whom or on whose behalf are those other applications being made?

Not applicable.

9. Further information

(a) Name and address of person authorised by the applicant to provide additional information in relation to this application:

Gilbert + Tobin

L35, Tower Two, International Towers Sydney

200 Barangaroo Ave

Barangaroo NSW 2000.

Attention: Paula Gilardoni
Tel: 02 9263 4187
Fax: 02 9263 4111
Email: pgilardoni@gtlaw.com.au

Dated 25 July 2016

Signed on behalf of the applicant

Paula Gilardoni
Gilbert + Tobin
Partner

Form B

Commonwealth of Australia

Competition and Consumer Act 2010 — subsections 88 (1A) and (1)

AGREEMENTS AFFECTING COMPETITION OR INCORPORATING RELATED CARTEL PROVISIONS: APPLICATION FOR AUTHORISATION

To the Australian Competition and Consumer Commission:

Application is hereby made under subsection(s) 88 (1A)/88 (1) of the *Competition and Consumer Act 2010* for an authorisation:

- to make a contract or arrangement, or arrive at an understanding, a provision of which would be, or might be, a cartel provision within the meaning of Division 1 of Part IV of that Act (other than a provision which would also be, or might also be, an exclusionary provision within the meaning of section 45 of that Act).
- to give effect to a provision of a contract, arrangement or understanding that is, or may be, a cartel provision within the meaning of Division 1 of Part IV of that Act (other than a provision which is also, or may also be, an exclusionary provision within the meaning of section 45 of that Act).
- to make a contract or arrangement, or arrive at an understanding, a provision of which would have the purpose, or would or might have the effect, of substantially lessening competition within the meaning of section 45 of that Act.
- to give effect to a provision of a contract, arrangement or understanding which provision has the purpose, or has or may have the effect, of substantially lessening competition within the meaning of section 45 of that Act.

1. Applicant

(a) Name of Applicants:

A91547

- Bendigo and Adelaide Bank;
- Commonwealth Bank of Australia (**CBA**);
- National Australia Bank (**NAB**); and
- Westpac Banking Corporation (**Westpac**).

This application is to be read and determined together with the submission supporting this application (**Submission**), which is lodged with this form.

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(a) Description of the contract, arrangement or understanding, whether proposed or actual, for which authorisation is sought:

The applicants seek authorisation on behalf of themselves and potentially other credit and debit card issuers to engage in limited collective negotiation with providers of third-party mobile wallet services on conditions relating to competition, best practice standards, and efficiency and transparency. The applicants also seek authorisation to enter into a limited form of collective boycott in relation to a third-party mobile wallet provider while collective negotiations with that provider are ongoing.

For more detail, please refer to the Submission.

(b) Description of those provisions of the contract, arrangement or understanding described at 2 (a) that are, or would or might be, cartel provisions, or that do, or would or might, have the effect of substantially lessening competition:

The limited collective negotiation and limited collective boycott proposed might be considered to have the purpose, effect or likely effect of substantially lessening competition to the extent that they affect the markets for the acquisition of mobile wallet or mobile payment services by issuers from third-party wallet providers, the supply of mobile wallet or mobile payment services by issuers to third-party wallet providers, or the supply of mobile wallet or mobile payment services to consumers; and might be considered to be cartel provisions to the extent that they have the purpose of preventing, restricting or limiting the supply of any services by issuers to third party mobile wallet providers during the period of any collective negotiation.

(c) Description of the goods or services to which the contract, arrangement or understanding (whether proposed or actual) relate:

Mobile wallet and mobile payment services.

(d) The term for which authorisation of the provision of the contract, arrangement or understanding (whether proposed or actual) is being sought and grounds supporting this period of authorisation:

Authorisation is being sought for three years.

The grounds supporting this period of authorisation are set out in the Submission.

3. Parties to the proposed arrangement

(a) Names, addresses and descriptions of business carried on by other parties or proposed parties to the contract or proposed contract, arrangement or understanding:

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- Westpac Banking Corporation (**Westpac**), 275 Kent Street, Sydney NSW 2000.

The arrangements may be extended to other card issuers who wish to participate in the collective negotiation. All parties or proposed parties engage in businesses that include the issuing of credit and debit cards and the provision of or participation in mobile wallet and mobile banking services.

(b) Names, addresses and descriptions of business carried on by parties and other persons on whose behalf this application is made:

See 3(a) above.

4. Public benefit claims

(a) Arguments in support of application for authorisation:

Please see Submission.

(b) Facts and evidence relied upon in support of these claims:

Please see Submission.

5. Market definition

Provide a description of the market(s) in which the goods or services described at 2 (c) are supplied or acquired and other affected markets including: significant suppliers and acquirers; substitutes available for the relevant goods or services; any restriction on the supply or acquisition of the relevant goods or services (for example geographic or legal restrictions):

Please see Submission.

6. Public detriments

(a) Detriments to the public resulting or likely to result from the authorisation, in particular the likely effect of the contract arrangement or understanding, on the prices of the goods or services described at 2 (c) and the prices of goods or services in other affected markets:

Please see Submission.

(b) Facts and evidence relevant to these detriments:

Please see Submission.

7. Contracts, arrangements or understandings in similar terms

(a) This application for authorisation may also be expressed to be made in relation to other contracts, arrangements or understandings or proposed contracts, arrangements or understandings, that are or will be in similar terms to the abovementioned contract, arrangement or understanding:

(b) Is this application to be so expressed?

No.

(c) If so, the following information is to be furnished:

(i) description of any variations between the contract, arrangement or understanding for which authorisation is sought and those contracts, arrangements or understandings that are stated to be in similar terms:

N/A

(ii) Where the parties to the similar term contract(s) are known — names, addresses and descriptions of business carried on by those other parties:

N/A

(iii) Where the parties to the similar term contract(s) are not known — description of the class of business carried on by those possible parties:

N/A

8. Joint Ventures

(a) Does this application deal with a matter relating to a joint venture (See section 4J of the *Competition and Consumer Act 2010*)?

No.

(b) If so, *are* any other applications being made simultaneously with this application in relation to that joint venture?

Not applicable.

(c) If so, by whom or on whose behalf are those other applications being made?

Not applicable.

9. Further information

(a) Name and address of person authorised by the applicant to provide additional information in relation to this application:

Gilbert + Tobin
L35, Tower Two, International Towers Sydney
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Attention: Paula Gilardoni
Tel: 02 9263 4187
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Email: pgilardoni@gtlaw.com.au

Dated 25 July 2016

Signed on behalf of the applicant

Paula Gilardoni
Gilbert + Tobin
Partner

PUBLIC VERSION

RESTRICTION OF PUBLICATION OF PART CLAIMED

Confidential Information marked in red on pages 4, 14, 24, 25, 26, 35 and 46.

Application for authorisation of limited collective negotiation in relation to mobile wallet and mobile payment systems

25 July 2016

Contents

Executive summary

Bendigo and Adelaide Bank, Commonwealth Bank of Australia, National Australia Bank and Westpac Banking Corporation seek authorisation to allow them, and other card issuers, to enter into limited collective negotiations with third party mobile wallet providers in relation to the introduction of mobile wallets in Australia.

Mobile wallets and mobile payments have a great chance to succeed in Australia given Australian consumers' enthusiasm for new technology and the widespread reliance on contactless card payments among both merchants and consumers. However, this potential may not be realised if mobile wallets are introduced in circumstances that restrict customer choice, security and transparency.

The applicants therefore wish to ensure they are able to collectively negotiate with third party wallet providers to facilitate competitive outcomes. The applicants also consider that a collective negotiation will only be effective if the participants can agree that they will not negotiate individually with third party wallet providers for the period of the collective negotiation.

The proposed collective negotiations will be limited to three issues intended to encourage the introduction of mobile wallet and mobile payment services in Australia in a manner that best promotes competition, security and transparency, namely:

- **competition:** maintaining competition and consumer choice by ensuring that a range of mobile wallet and payment options are available on all mobile platforms;
- **best practice standards**: promoting best practice industry standards and guidelines for mobile wallet security and related issues, such as the APCA Third Party Digital Wallet Security Industry Guidelines; and
- **efficiency and transparency:** ensuring that any fees for the use of third party mobile wallets are efficient and fully transparent.

The proposed collective negotiation is intended to have a number of benefits, including greater competition in mobile payments, greater compliance with industry standards and best-practice principles, and greater price transparency in payments.

The conduct to be authorised will not prevent or impede the entry of any third party wallet into Australia or restrict customer choice. Any potential public detriments will be limited by the narrow scope of the collective negotiation and the ability of third party wallet providers to negotiate individually with a wide range of large and small issuers who choose not to participate in any collective negotiation.

1 The applicants

1.1 List of entities seeking authorisation

- Bendigo and Adelaide Bank;
- Commonwealth Bank of Australia (**CBA**);
- National Australia Bank (**NAB**); and
- Westpac Banking Corporation (**Westpac**).

1.2 Overview of each applicant's operations in Australia

(a) Bendigo and Adelaide Bank

Bendigo and Adelaide Bank is an Australian financial institution with a history originating back to 1858. Bendigo and Adelaide Bank operates primarily in retail banking under its retail arm, Bendigo Bank, which provides banking and wealth management services to more than 1.5 million retail customers. Bendigo Bank's retail offering includes transaction accounts, term deposits, credit and debit cards, loans, insurance and wealth management products and services. Bendigo Bank has a presence in all states and territories in Australia with more than 600 branches and agencies, including 313 locally-owned Community Bank branches and in excess of 1600 ATMs.

Bendigo Bank offers mobile banking and payments on both iOS and Android devices, providing secure PIN access, easy-to-read graphs and intuitive functionality across a range of banking features. New features launching soon will enable management of card payments and support for securely provisioning cards to the third-party wallet from Google – Android Pay.

In addition, Bendigo Bank offer a loyalty mobile-based payment system, Redy, which can be used to purchase goods and services from participating businesses, as well as accumulate reward dollars to allocate to charities or local community projects. The Redy system requires specialised point-of-sale hardware that generates QR codes, which users scan and accept via the Redy mobile app.

(b) Commonwealth Bank of Australia

CBA is an Australian bank that provides integrated financial services including retail, business and institutional banking, funds management, superannuation, insurance, investment and broking products and services. In terms of retail banking, CBA provides a full range of services including credit cards, personal loans, transaction accounts, and demand and term deposits through its Commonwealth Bank and Bankwest brands to personal and small business customers. CBA operates a large national network that includes over 1,100 branches and over 4,300 ATMs.

CBA offers mobile banking and payments through its CommBank app for smartphones. This app provides customers with a range of banking features including transferring money and paying bills. The CommBank app also facilitates Tap & Pay payments at contactless terminals on compatible Android devices running on KitKat 4.4 or later, with inbuilt NFC enabled. On smartphones that are not NFC capable, CBA currently offers PayTags that are attached the phone and enabled within the CommBank app.

(c) National Australia Bank

NAB is an Australian financial services organisation that offers a range banking and financial services including personal, business and institutional banking, private wealth and investment advisory. NAB's business segments include Australian Banking, NAB Wealth, NZ Banking and UK banking. Retail banking products and services in Australia, including credit and debit cards, transaction accounts and personal loans, are offered through the Australian Banking business segment. NAB operates an Australia-wide network of over 1,500 branches and business banking centres and over 3,400 ATMs.

In terms of mobile banking and payments, NAB has a mobile app for iOS and Android phones that has an integrated feature called NAB Flik that supports peer-to-peer payments via mobile phone number, Facebook, QR code or NFC (between two NFC enabled phones) between devices running NAB Flik. NAB has also recently introduced NAB Pay, allowing mobile payments on NFC-enabled Android devices.

(d) Westpac Banking Corporation

Westpac is an Australian bank and financial services provider. Westpac provides a range of banking and financial services including consumer, business and institutional banking and wealth management services. Westpac operates through five divisions: Consumer Bank, Commercial and Business Bank, BT Financial Group, Westpac Institutional Bank and Westpac New Zealand. The Consumer Bank division is responsible for retail banking products and services, including bank accounts, credit and debit cards and loans, and operates under the Westpac, St. George, BankSA, Bank of Melbourne and RAMS brands. Westpac operates a nationwide network of 840 branches and over 2,000 ATMs. St. George operates a network of over 450 branches and over 1,000 ATMs.

Westpac offers mobile banking and payments through its mobile apps for smartphones. The mobile app uses the embedded Secure Element (**eSE**) on selected Samsung models to facilitate NFC payments. Users are able to store Westpac issued debit and credit cards within the mobile app and use those cards for mobile payments. The Westpac mobile app also allows peer-to-peer payments using mobile numbers rather than bank details.

1.3 Extension of authorisation to other card issuers

Prior to the commencement of any limited collective negotiation with a mobile wallet provider, the applicants will invite other card issuers to participate in the negotiation. A period of time will be identified in the invitation within which the card issuers will be asked to respond to the invitation. Any issuers who elect to participate within the specified time will join the collective bargaining group. Accordingly, the applicants seek authorisation for themselves and for any other card issuers who elect to join the collective bargaining group.

[c-i-c]

2 Conduct to be authorised

2.1 Description of limited collective bargaining conduct to be authorised

The applicants wish to encourage the introduction of mobile wallet and mobile payment services in Australia in a manner that best promotes:

- competition, customer choice and confidence, innovation and investment in mobile payments; and
- the security, stability and efficiency of the payments system.

The conduct the subject of this authorisation applies to mobile wallets that have been developed and offered to card Issuers by a third party (**Third Party Wallets**), excluding mobile wallets that may be deployed by Issuer for its own cards and cardholders, or any mobile wallets that may be offered by a card scheme (such as Visa or MasterCard) to members of that scheme.

The provider of a Third Party Wallet (**Third Party Wallet Provider**) will typically seek to negotiate with card issuers in order to make the wallet available to the issuer's customers. In the normal course, the Third Party Wallet Provider and the issuer would negotiate terms that best meet their commercial requirements.

However, there are some Third Party Wallet Providers who, by reason of their scale and influence, combined with their control of key mobile hardware and/or operating systems, could be in a position to negotiate terms that would be likely to result in reduced competition and innovation, and increased risk in the security and transparency of mobile payments. The applicants wish to have the ability to engage in limited collective negotiation with Third Party Wallet Providers who are in this position.

The subject matter of the collective negotiations would be limited to:

- **competition:** the applicants wish to ensure that the potential for competition and innovation in the emerging market for mobile payments is maintained. Therefore, they wish to collectively negotiate in response to any technological or other exclusivity that a Third Party Wallet Provider may seek to impose by:
  - refusing, restricting or failing to provide software access to any payment functionality built into devices manufactured by or for, or operating systems developed or distributed by, the Third Party Wallet Provider, for example NFC functionality; and/or
  - 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;
- **best practice standards**: the applicants wish to collectively negotiate with Third Party Wallet Providers in order to maintain consistent and best practice standards relating to fraud management, security, and identification and verification (**ID&V**) in mobile payments in Australia. Therefore, the applicants wish to:

- require Third Party Wallet Providers to comply with any agreed industry standards or guidelines that may be in place at the time of negotiation, such as the APCA Third Party Digital Wallet Security Industry Guidelines, if they are not already compliant with those standards; or

- where industry standards or guidelines are not yet in place, collectively negotiate best practice principles and technical standards with Third Party Wallet Providers that preserve the safety, security and stability of mobile payments systems in Australia; and

- **efficiency and transparency:** the applicants wish to collectively negotiate with Third Party Wallet Providers with a view to promoting efficiency and transparency by ensuring that Third Party Wallet Providers do not restrict the ability of issuers to pass through any fees or charges imposed on issuers by Third Party Wallet Providers.

Accordingly, the applicants seek authorisation to:

- collectively negotiate with the relevant Third Party Wallet Provider on these issues; and

- enter into a limited form of collective boycott where the applicants will agree not to negotiate with the relevant Third Party Wallet Provider on an individual basis while collective negotiations with that Third Party Wallet Provider are ongoing.

2.2 Rationale for the conduct

The proposed conduct seeks to enable and facilitate ongoing competition, customer choice and confidence, innovation and investment in mobile wallet and mobile payment services in Australia.

Australia has led the world in the adoption of advanced payment technologies such as EMV[1] chip-and-pin security and contactless payments.[2] Its smartphone adoption is also among the highest in the world.[3] Australia is therefore well positioned to make the shift towards mobile payment systems and mobile wallets that may come to replace plastic cards and physical wallets, and will be an attractive territory for NFC-based Third Party Wallet Providers. It was one of the earliest launch countries outside the US for Android Pay, and has been an early target for Apple Pay and Samsung Pay.

However, in the applicants' view mobile payments will only succeed if they offer customers, merchants and financial institutions the right combination of convenience, security and cost.

In the applicants' view, these attributes will only be developed in an environment in which vigorous competition drives innovation, efficiency and continuing investment. Conversely, the introduction of mobile payment or mobile wallet services on a basis that limits or prevents competition is likely to result in fragmentation, under-investment and a reduction in innovation and customer choice.

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1 EMV stands for Europay, MasterCard and Visa and refers to a technical standard developed by those credit card schemes to govern smart payment cards and compatible payment terminals and automated teller machines. EMV systems are differentiated from older systems by using integrated circuits, or chips, in preference to the older magnetic stripes, and benefit from greater security and additional functionality.

2 RFi, *Global Payments Evolution Study*, May 2015.

3 Deloitte, *Mobile Consumer Survey 2014*.

(a) Power of Third Party Wallet Providers

Such limits to competition could occur where the applicants are negotiating with Third Party Wallet Providers that, due to their scale, influence and control of key mobile hardware and/or mobile operating systems, have the ability to impose highly restrictive terms and conditions.

Certain Third Party Wallet Providers will have considerable bargaining power in relation to card issuers given their influence in the mobile communications landscape. The main Third Party Wallets being introduced in Australia are Apple Pay, Android Pay and Samsung Pay. More than 90% of smartphones sold in Australia depend on either Apple's iOS or Google's Android operating system. Samsung is by far the leading manufacturer of mobile devices that use the Android operating system, and Apple is the only manufacturer of mobile devices that use the iOS operating system.

As a result, Google has significant bargaining power in negotiations relating to Android Pay due to its control of a key operating system, and Samsung has significant bargaining power in negotiations relating to Samsung Pay due to its control of key mobile hardware.

However, Apple has particularly significant bargaining power in negotiations relating to Apple Pay due to its control of both a key operating system and key mobile hardware. Apple's bargaining power in the proposed negotiations is increased because:

- Apple currently has a higher share of the smartphone market in Australia than in almost any other country, with 41.2% of the market,[4] and sold the two most popular handsets in Australia (as well as the fourth most popular) in the quarter to December 2015; and[5]

- the average iPhone user is more affluent, spends more, uses mobile banking services more frequently, and adopts and consumes technology more enthusiastically than other smartphone users, making them particularly valuable to issuers.[6]

This bargaining power and Apple's negotiating strategies appear to have resulted in Apple Pay being introduced in other countries in circumstances that limit customer choice, security and transparency and that the applicants wish to avoid.

(b) Misaligned incentives in relation to security and fraud prevention

It has also been reported that in other countries there have been concerns with the on-boarding process associated with Third Party Wallets, which have resulted in high rates of fraud.[7]

While Third Party Wallet Providers appear to focus on ease of "customer experience", there has not always been the same emphasis on the security of loading credentials. For example, Third Party Waller Providers may emphasise

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4 Kantar WorldPanel data for three months to January 2016.

5 "Kantar OS stats: Apple leads as top brand in US, China but Android grows in US, Europe", *IT Wire*, 27 January 2016.

6 "What Kind Of Person Prefers An iPhone?" *Forbes*, 10 April 2014.

7 "Pointing fingers in Apple Pay fraud", *New York Times,* 16 March 2015; Canadian Bankers Association, *Payments Security White Paper ,* 13 July 2015.

biometric security features such as fingerprint scanners as an appealing implementation of a customer verification method (**CVM**) that demonstrates the advanced technological capabilities of their hardware and software. However, they may pay less attention to identification and verification, which is by its nature a more laborious and low-technology process.

This focus on consumer experience is not surprising considering each Third Party Wallet Provider's history and position as a consumer technology company. However, there are two problems when trying to apply this strategy to payments. First, making on-boarding processes easy for customers also makes it easy for those wishing to commit fraud. Second, there is a question as to who pays for the cost of fraud. In the case of Third Party Wallet payments, the immediate costs of fraud are not necessarily the responsibility of the Third Party Wallet Provider. Rather, liability for fraudulent transactions typically rests with the card issuer. This presents a particular challenge for card issuers negotiating with Third Party Wallet Providers on an individual basis because it is very difficult (and not particularly effective) for individual card issuers to impose very restrictive fraud prevention mechanisms (which will typically be seen as having a negative impact on the ease of customer experience) unless those fraud prevention mechanisms are applied on an industry-wide basis.

Although particular issues around security appear to have been ameliorated since the first introduction of Third Party Wallets, they illustrate the risks of introducing Third Party Wallets without regard to specific industry standards on security and related issues, and of relying on Third Party Wallet Providers to design security processes that have a greater impact on other parties than they do on Third Party Wallet Providers themselves.

(c) Regulatory asymmetry

It has also been reported that in other countries some Third Party Wallet Providers have imposed limits on issuers' ability to set fees and charges for the use of Third Party Wallets in a manner that reflects their direct costs (in effect requiring that issuers and their customers cross-subsidise the cost of offering Third Party Wallets). Some Third Party Wallet Providers have been reported to have negotiated these terms under conditions of strict secrecy, refusing to disclose any details of their proposals until the other party had agreed not to disclose any aspect of the negotiation, including their participation in it; suggesting that all other issuers had signed up to their Third Party Wallets on the terms offered and the other party risked missing out; and offering contracts on a "take it or leave it" basis.[8]

However, in Australia, the banks face a number of regulatory obligations and restrictions in relation to the fees and charges that can be imposed for transactions such as those typically completed using a Third Party Wallet (see more detailed discussion in section 3.4 below). Third Party Wallet Providers do not face the same obligations and restrictions. Regulatory constraints applied to issuers and not to Third Party Wallet Providers increase the bargaining power of Third Party Wallet Providers significantly.

(d) Concerns with the introduction of Third Party Wallets in other countries

The bargaining power of Third Party Wallet Providers, and the concerns that may arise if that power cannot be counterbalanced are illustrated by the introduction of

[8] "Banks did it Apple's way in payments by mobile", *New York Times*, 11 September 2014.

Apple Pay in other countries, namely on the basis that Apple Pay will be the only mobile payment system permitted on the iPhone platform.

Apple Pay has now been fully launched in six markets to date: the United States in 2014, the United Kingdom in 2015 and China, Canada, Singapore and Hong Kong in 2016. It has been launched on a more limited basis in Australia, launching with cards issued by American Express in November 2015 and by ANZ in April 2016. In July 2016 it launched in Switzerland with three initial card issuers but without major banks such as UBS and Credit Suisse,[9] and in France with the fourth-largest banking group, Banque Populaire/Caisse d'Epargne, but without the largest banks such as BNP Paribas, Crédit Agricole and Sociéte Générale.[10]

Mobile payment apps other than Apple Pay are not available on Apple devices in any of these countries, even though many participating banks had already developed their own mobile payment apps for other platforms and hoped to make them available on the iPhone.

Some issuers in other countries have expressed concern that Apple has not allowed other mobile payment apps to use the iPhone's NFC payment functionality. For example, in March 2016 the chief executive of Orange in France said in an interview that he had asked Apple's CEO to provide access to the iPhone's NFC functionality for the Orange Cash mobile payment system, which uses the same NFC technology on the Android platform.[11] When Apple Pay's expansion to France was announced in June 2016, Orange announced that its customers would be able to load their Orange Cash virtual cards into the Apple Pay wallet – but the Orange Cash app remains unable to access iPhone's NFC functionality itself.[12]

Similarly, in July 2016 the Swiss consumer protection authority Stiftung für Konsumentenschutz (**SKS**) filed a complaint with the Swiss competition commission Wettbewerbskommission (**Weko**) in relation to Apple's refusal to grant other mobile payment apps – in particular Twint, backed by the major Swiss banks including UBS and Credit Suisse – access to the iPhone's NFC technology ahead of the Apple Pay launch.[13] Apple reportedly confirmed that it would not open up NFC functionality for third-party payment services, for reasons of security and convenience.[14] Weko has reportedly said that it is aware of the problem and will watch how the market develops.[15]

Without access to the iPhone's NFC functionality, Twint has been forced to rely on Bluetooth technology which is built into the iPhone but requires merchants to install new point-of-sale technology. Swiss media reports that, apart from being later to market than Apple Pay:

> Twint faces another significant disadvantage against Apple Pay: Apple blocks NFC (Near Field Communication) technology in its smartphones for

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9 "Apple Pay now available in Switzerland", Apple Press Release, 7 July 2016.

10 Information at <apple.com/fr/apple.pay/> accessed on 20 July 2016.

11 "Orange CEO fuels hope that Apple may grant 3rd-party apps & services access to iPhone NFC chip", *Apple Insider*, 17 March 2016.

12 "Apple Pay coming to Orange Cash customers in France later this year", Orange Press Release, 14 June 2016.

13 "SKS files Apple m-payments complaint with Weko", *Telecom Paper*, 6 July 2016; "Apple Pay now available in Switzerland", Apple Press Release, 7 July 2016.

14 "Apple Pay startet in der Schweiz", *Neue Zürcher Zeitung*, 7 July 2016.

15 "Konsumentenschutz reicht Klage bei Weko ein", *Neue Zürcher Zeitung*, 6 July 2016

> other payment operators. With a 50 per cent share of the smartphone market [in Switzerland], that is a serious obstacle. It was already enough to cause the Swisscom payment app Tapit to fail.
>
> In the meantime, Apple Pay can connect with the payment terminals of most Swiss retailers. The Bluetooth technology, which Twint relies on, is not yet widely used in stores.[16]

Apple's refusal to provide third-party apps with any access to the NFC functionality of its devices sets it apart from other hardware manufacturers, operating system providers and Third Party Wallet Providers such as Google, Samsung and Microsoft. It is also inconsistent with Apple's treatment of most of the other hardware and software features it has developed. For example, app developers are able (with the user's permission) to make use of the iPhone's camera, microphone and accelerometer, its cellular, Wi-Fi and Bluetooth transmitters and its Touch ID fingerprint sensor, but not its NFC functionality.

In some cases Apple has delayed third-party access to certain functions until new versions of iOS are developed – for example, developer access to the Touch ID sensor was announced nine months after it was first included in an iPhone. It is now almost two years since the first NFC iPhone was released. There is no suggestion that NFC access will be included in the next version of iOS, and the remarks attributed to Apple in relation to the Swiss complaint do not suggest that this position is soon likely to change.

iPhone users typically purchase their handsets outright or by instalments and may be surprised and disappointed to discover that they are unable to use the full capability of the hardware they have purchased – particularly where the limitations appear to restrict or exclude services that would otherwise compete with the services offered by the hardware manufacturer.

More detailed cases studies are set out below.

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16 "Apple Pay arrival unseats Swiss competition" *Finews*, July 2016.

Case Study: Outcome of negotiations in the United States

Apple's negotiations with its launch banks in the United States were reportedly conducted under conditions of the strictest secrecy.[17] It has been reported that:

> In the summer of 2013, Apple approached each of the five major banks involved in the project, without revealing what other banks were involved.
>
> JPMorgan, the largest card issuer in the country, set up a war room in a windowless conference room in San Francisco, where the most sensitive work was done. Only about 100 of the 300 JPMorgan employees working on the project knew that it was a partnership with Apple…
>
> Even the people involved most closely in the partnership were not told the actual name – Apple Pay – until Mr Cook announced it on stage. The marketing that the banks had prepared in advance left blank spaces for the name, and for the new Apple devices used in Apple Pay, which the banks also did not know about in advance.[18]

These conditions made it possible for Apple to play banks off against each other, and exploit each bank's concern that another issuer might take its place as a launch partner. The launch banks reportedly made a number of significant concessions, including agreeing not to pass transaction fees on to customers and acquiring particular tokenisation services from the card schemes.

The smallest of the US launch banks, Capital One, is still larger in terms of annual revenues than any of the applicants; and all of the other US launch banks – JPMorgan Chase, Bank of America, Citi and Wells Fargo – are global systemically important banks (**G-SIBs**) each with higher individual revenues than all of the applicants combined.

Despite the negotiating power of the US banks – which is significantly greater than that of any individual Australian bank – Apple Pay remains the only integrated contactless payment option available on Apple devices in the United States. A number of US banks, including Capital One, are testing or offering NFC payment apps on Android, but none have been able to offer similar functionality through their iPhone apps.

17 "Apple went to insane lengths to keep Apple Pay a secret", *Business Insider*, 13 September 2014.

18 "Banks did it Apple's way in payments by mobile", *New York Times*, 11 September 2014.

Case Study: Outcome of negotiations in the United Kingdom

In the United Kingdom, where credit card interchange fees are now capped at 0.30% – compared to an average of 1.5% for standard cards in the United States[19] – it has been reported that card issuers were able to negotiate a lower transaction fee from Apple.[20]

However, Apple Pay remains the only integrated contactless payment option available on Apple devices in the UK.

Apple announced on 8 June 2015 that it would soon introduce Apple Pay in the UK, with almost every major bank available at launch or later in the year. The exception was Barclays, which immediately received complaints from customers threatening to change banks. That night Barclays said on Twitter:

> Thanks for your tweets this evening. We can assure you that we've been talking with Apple about how our customers could use Apple Pay in addition to our existing mobile and payment services, and that these talks remain constructive.[21]

Barclays had developed a number of its own mobile payment products in the United Kingdom, including:

- "Quick Tap" SIM-based NFC payments available on a number of Android handsets from 2011 to 2014; and
- "Paytag" and "bPay" NFC stickers, fobs and keychains available since 2012.

In late June 2015 it introduced a new generation of bPay stickers, fobs and wristbands.[22] On the day of Apple Pay's UK launch, Barclays confirmed that it would support Apple Pay "in the future",[23] though it did not do so until 5 April 2016.

In the meantime Barclays had introduced an update to its Barclaycard app on the Android platform to enable HCE-based NFC payments on compatible devices. It was reported that:

> Barclaycard could not confirm whether the update was coming to iOS, but did say that Apple Pay is still in the works as well, although there's no update on when it will be officially rolling out.[24]

Barclays is one of the largest banks in the world and is a global systemically important bank, but it has apparently accepted Apple Pay on Apple's terms, and while it has a wide range of NFC payment options including NFC payments on its Barclaycard Android app, it remains unable to offer the same functionality on its iPhone app.

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19 "Credit and debit card interchange fees in various countries: August 2015 Update", Payments System Research Department, Federal Reserve Bank of Kansas City, August 2015.

20 Martin Arnold, Andrea Felsted and Daniel Thomas, "UK banks put squeeze on Apple Pay fees", *Financial Times*, 14 July 2014.

21 "Barclays doesn't support Apple Pay, but it's likely to", *Engadget,* 8 June 2015.

22 "Pay with a flick of the wrist with new bPay wristband, key fob and sticker", *CNET*, 24 June 2015.

23 "Apple Pay holdout Barclays has finally caved and promised to add support", *Business Insider*, 14 July 2015.

24 "Barclays' Apple Pay and Android Pay rival has finally been revealed", *Techradar,* 14 January 2016.

Case Study: Outcome of negotiations in Canada

Apple Pay in Canada is only available to American Express-issued cards. It has been rumoured that Apple Pay would launch with other issuers since at least April 2015,[25] with signs pointing to TD Canada Trust in October 2015[26] and CIBC in February 2016.[27] A wider launch was finally announced in May 2016, with RBC, CIBC, ATB and Canadian Tire available at launch[28] and the remaining major banks (TD Canada Trust, Scotiabank and Bank of Montreal) joining in June 2016[29].

Prior to April 2015, the Canadian banks had reportedly "formed a consortium and hired consultancy McKinsey to help develop a security protocol for Apple Pay".[30] In July 2015, they published the Canadian White Paper, which assessed the recent development of Apple Pay, Android Pay and Samsung Pay and suggested principles of security, openness and innovation. Central to the White Paper is the intention to:

> Create and support an open mobile payments environment that allows consumers to pay for goods and services using any mobile wallet on any mobile device, leveraging, the contactless payment terminals that many retailers already have.[31]

A number of the banks had released their own mobile wallet and mobile payment apps on the Android and BlackBerry platforms, including CIBC, TD, RBC, Scotiabank and Desjardins. A number of them also participate in the third party open mobile wallets Suretap (CIBC and Rogers) and Ugo (TD and President's Choice) which offer NFC payments on Android and BlackBerry devices. It was reported that:

> The Canadian expansion follows a period of uncertainty in the country's mobile wallet space, as the major financial institutions have been working to develop their own solutions. CIBC, Bank of Nova Scotia and Royal Bank of Canada are among the banks that were chasing after consumer digital transactions with their own apps.
>
> The banks, which have been in talks with Apple for months, had indicated that two issues were fundamental to any partnership with the tech giant: The need to maintain client security and to preserve client relationships. But the financial institutions were realistic, too, recognizing the pull of a brand like Apple and realizing that they did not want to put customers in the position of having to choose between their bank and their phone.[32]

Even with a degree of coordination through the security consortium, the Canadian banks were not able to persuade Apple to allow them to deploy their own apps on the iPhone platform.

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25 "Apple Pay plans to launch in Canada this Fall", *Wall Street Journal,* 17 April 2015.

26 "TD Canada Trust website lists Apple Pay under 'Ways to Pay'", *iPhone in Canada*,13 October 2016.

27 "CIBC to support Apple Pay soon as Terms of Service appears", *iPhone in Canada*, 16 February 2016.

28 "Canadian banks, including 'the Big Five', sign on for major Apple Pay expansion", *Financial Post*, 10 May 2016.

29 "Apple Pay expands in Canada", *Fortune*, 1 June 2016.

30 "Apple Pay plans to launch in Canada this Fall", *Wall Street Journal,* 17 April 2015.

31 *Payments Security White Paper* at p 2.

32 "Canadian banks, including 'the Big Five', sign on for major Apple Pay expansion", *Financial Post*, 10 May 2016.

(e) Need for collective negotiations in Australia

Australia remains a small market compared to the United States and the United Kingdom, and its banks have much less bargaining power than the major banks of those countries (many of whom are larger than the entire Australian banking industry).

In those countries, individual negotiation has resulted in the banks accepting Apple Pay on Apple's terms. This appears to have resulted in outcomes that have lessened competition in mobile wallets and mobile payments: for example, banks remain unable to develop their own NFC payment applications on the iPhone even where they have done so for the Android platform.

Barclays in particular initially resisted the Apple Pay proposition, and its early language suggests that it hoped to provide its own NFC payments alongside Apple Pay on the iPhone. By the time Apple Pay had launched in the UK it had committed to participating, and it now offers Apple Pay as its only integrated NFC payment option on the iPhone.

The Canadian banks had gone even further in developing their own NFC mobile payment apps and open mobile wallets on the Android and BlackBerry platforms, and had formed a consortium to promote the principle that consumers should be allowed to pay for goods and services "using any mobile wallet on any mobile device". They held out for longer than the UK banks but agreed to Apple's terms in April 2016 and appear to have accepted that their customers with iPhones will only be able to use Apple Pay.

The applicants consider it unlikely that any Australian bank negotiating individually could achieve a different result. Given the above context and the experience in other countries in which Apple Pay has launched, collective negotiation will be required in Australia to overcome the disadvantages the applicants will face in individual negotiations (in terms of size, bargaining power and regulatory and information asymmetries), and to achieve the most efficient and optimal outcome that will preserve and increase competition and best practice principles in mobile payment and mobile wallet services.

The applicants have engaged Charles River Associates International to assess the likely outcome of individual negotiations in the expert report submitted with this application. The report examines the incentives and relative bargaining power of Third Party Wallet Providers and the individual issuers and concludes, using Apple Pay as an example:

> We expect the likely counterfactual to be one in which, initially, some of the applicants reach agreements with Apple including exclusivity for Apple Pay and seek thereby to gain a competitive advantage (or to neutralise a potential competitive disadvantage), while others may "hold out" for a while…
>
> However, we expect that over time, as mobile payments become more prevalent and then commonplace, and as more issuers join Apple Pay, and given the importance of iOS device users as customers, the increasing competitive disadvantage faced by issuers without agreements with Apple will ultimately persuade all issuers to reach agreements with Apple that accept exclusivity for Apple Pay. This has been the experience in the UK, which is similar to Australia in having a large segment of iOS device users and a large network of merchant terminals ready to accept contactless payments via NFC chips, meaning that the situation in the UK (as it is in

Australia) is ripe for iOS device users to quickly move from physical card payments to mobile payments.[33]

[c-i-c]

2.3 Collective bargaining and limited boycott process

The applicants seek authorisation to allow them to collectively negotiate with particular Third Party Wallet Providers as and when they consider that collective negotiation is necessary to achieve satisfactory outcomes in relation to the specific issues identified in this application. Authorisation would not prevent the applicants or any other Issuer from negotiating individually with any Third Party Wallet Provider unless and until they choose to participate in a collective negotiation with a particular Third Party Wallet Provider.

Accordingly, the applicants propose the following process:

- Where the applicants are concerned that individual negotiation is not likely to achieve satisfactory results in relation to the specific issues identified in this application, they may propose a limited collective negotiation with the particular Third Party Wallet Provider.

- The applicants will then invite other card issuers to participate in the negotiation. A period of time will be identified in the invitation within which the card issuers will be asked to respond to the invitation. Any issuers who elect to participate within the specified time will join the collective bargaining group.

  Where the Third Party Wallet Provider has a substantial degree of control of key mobile hardware and/or mobile operating systems, the collective bargaining group may agree to negotiate with the Third Party Wallet Provider on the understanding that members of the collective bargaining group will not individually deal with the Third Party Wallet Providers while collective negotiations are on foot.

- Any collective negotiations will last for a maximum of 12 months unless extended by the agreement of the collective bargaining group.

2.4 Term of authorisation

Authorisation is sought for a period of three years.

2.5 Request for interim authorisation

The applicants request that the ACCC grant interim authorisation within 28 days of lodgement of this application so that the applicants, and any other issuers who wish to participate in a collective negotiation, may commence negotiations on the limited issues identified while the ACCC is considering the application for authorisation.

This is a critical time for mobile wallets and mobile payments in Australia. As of mid-July 2016, all three major Third Party Wallets have now launched in Australia and the development of the mobile wallet industry is likely to accelerate due to a number of initiatives now underway.

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[33] At [86].

For example, Transport for NSW has announced a trial of an "open loop" alternative to the Opal public transit smart card, which would allow passengers to tap on and off with their contactless credit or debit cards – or their NFC-enabled smartphones – instead of a proprietary single-purpose smart card.[34]

A similar transition began in relation to Transport for London's Oyster card system in 2012, and following the introduction of Apple Pay in the UK mobile transit payments have risen steadily, by January 2016 accounting for 1% of all fares and 3.5% of all contactless fares, with 1,000 additional mobile devices being used every day.[35] The Opal card is provided with the same technology partner as the Oyster card, and it is likely that the move to the open loop format will see a similar surge in mobile payments in Australia.

At the same time, 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,[36] while 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.[37]

As mobile wallets take over more of the key functions of physical wallets, the appeal and adoption of mobile wallets is likely to increase significantly. As long as a physical wallet is necessary for certain essential credentials or cards, the advantages of a mobile wallet may be limited; but as it becomes possible to rely solely on mobile wallets in more and more circumstances, the value, convenience and adoption of mobile wallets are likely to accelerate rapidly.

In the face of these developments, all issuers are under increasing pressure from their customers to offer the Third Party Wallets that have now launched in Australia – even if some of those Third Party Wallets are offered under conditions that do not facilitate competition, compliance with best practice standards and transparency. In this context Third Party Wallet Providers are likely to continue to approach industry participants, including the applicants, individually and on conditions of strict confidentiality, to secure individual agreements, and the more issuers that conclude individual negotiations with particular Third Party Wallet Providers, the more difficult it will be for other issuers – negotiating individually or collectively – to achieve more competitive outcomes.

This risk is illustrated by the experience of the introduction of Third Party Wallets in other countries – particularly Canada, where the major issuers were strongly committed to standards of security, openness and innovation, but were in the end unable to insist on these standards when faced with individual negotiations on a "take it or leave it" basis (or, in the alternative, facing the prospect of key Third Party Wallets being introduced without them). Similar considerations now confront issuers in Australia.

Without interim authorisation, it will be increasingly difficult for issuers to resist these approaches and increasingly likely that individual issuers (and ultimately the industry as a whole) will be forced to accept terms and conditions that will limit competition, innovation and investment, efficiency and transparency in mobile wallets and mobile payments. Once a critical mass of issuers have agreed to these terms and conditions there may not be another comparable opportunity to promote competition and innovation in the industry.

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34 "The new Opal: Commuters to trial tapping of credit card to pay for trips", *Sydney Morning Herald*, 18 April 2016.

35 "TfL sees over 3 million mobile phone journeys since Apple Pay launch" *Telegraph*, 28 January 2016.

36 "First digital licences ready for download mid 2016", NSW Government Press Release, 25 November 2015.

37 "Digital Wallet—concession provider factsheet", Department of Human Services.

Interim authorisation would allow participants to negotiate individually with Third Party Wallet Providers on the commercial issues not contemplated by this application, while commencing collective negotiation on the limited issues of competition, standards, and efficiency and transparency. These latter issues would be collectively negotiated subject to final authorisation by the ACCC, so that if final authorisation is not granted there will be no arrangements to unwind or reverse.

The ACCC's Authorisation Guidelines provide that:

> Interim authorisation is more likely to be granted when it will maintain the market status quo. Interim authorisation is unlikely to be granted if doing so would permanently alter the competitive dynamics of the market or inhibit the market from returning to its pre-interim state if final authorisation is later denied.[38]

In the present circumstances, interim authorisation will in the short term maintain the market status quo and avoid altering the competitive dynamics of the market. It will also allow a more timely resolution of these important issues, whatever the ACCC's final determination.

2.6 Non-admission

While recognising that the conduct for which authorisation is sought might be argued to constitute a contract, arrangement or understanding that includes an exclusionary provision and/or a cartel provision or that may have the purpose, effect or likely effect of substantially lessening competition in a market, no admission is made that the conduct for which authorisation is sought constitutes a contract, arrangement or understanding that includes an exclusionary provision or a cartel provision or that may have the purpose, effect or likely effect of substantially lessening competition in breach of the *Competition and Consumer Act 2010*, and this application for authorisation should be regarded as precautionary only.

3 Mobile payments and mobile wallets overview

3.1 What is a mobile payment?

A mobile payment is a payment or transfer of money initiated on a mobile device such as a mobile phone or tablet. Mobile payments may include:

- online shopping, where a user visits a merchant's application (or **app**) or mobile website and enters their credit or debit card or other payment details (which may be stored on their mobile device for convenience);
- direct peer-to-peer payments, where a user can use a mobile banking or payments app or website to transfer money from their bank account to another user's bank account using their account details or another identifier such as a mobile phone number or e-mail address;
- online wallets, where users can transfer funds (often automatically) to an online account and easily use those funds to purchase goods or services from participating online merchants or initiate peer-to-peer payments;

[38] ACCC, *Authorisation Guidelines 2013*, 1 July 2013 at para 8.5.

- QR code[39] payments, where users can initiate a payment by displaying a two-dimensional barcode on their mobile phone screen to the compatible scanner of a participating merchant and have the payment deducted from a stored amount or a linked account; and

- NFC[40] payments, where users can initiate a payment by placing an NFC-equipped mobile phone near or against a contactless terminal, effectively emulating a contactless credit or debit card and using existing card schemes.

NFC payments are particularly important in Australia as they can take advantage of the wide distribution of contactless terminals and existing card schemes (as discussed below). Other forms of in-store payment require dedicated acceptance hardware, which may limit adoption or require more user effort to initiate and validate payments.

3.2 What is a mobile wallet?

A mobile wallet is a smartphone application or service that facilitates mobile payments and may also store other valuable information, such as merchant stored value or loyalty cards; boarding passes; event tickets; coupons; and identification and membership cards.

A mobile wallet will typically be:

- part of a mobile banking app, in which case the wallet aspect is likely to be limited to providing mobile payments involving accounts with that bank, in addition to other mobile banking services such as balance inquiries and transfers;

- part of a merchant's app, in which case the wallet aspect is likely to be limited to stored value, loyalty information and coupons relevant to that merchant;

- a standalone app provided by one or more banks, which is likely to be limited to facilitating payments through the participating banks, though it may also store loyalty and gift cards; or

- a third-party wallet app that may be provided by a handset manufacturer, a mobile carrier or an independent developer to facilitate payments through a wide range of banks and schemes and may include a wide range of other information.

3.3 Supply of mobile payments and mobile wallets

The supply of a mobile payment or mobile wallet service capable of contactless NFC payments requires the ability to deploy an application – typically via an app store – to an NFC-capable mobile device running an operating system that allows third-party access to the device's NFC hardware. There are several elements involved in this process, as set out below.

(a) Device manufacturers and operating system providers

Mobile payment facilities and mobile wallets both take the form of apps running on smartphones. Currently, the largest smartphone manufacturers both globally and in Australia are Apple and Samsung.[41]

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39 "QR code" stands for Quick Response Code and is a two-dimensional evolution of the traditional barcode which allows complex information to be encoded in visual form.

40 "NFC" stands for "Near Field Communication" and refers to a group of standards and protocols for radio communications over a short distance, typically 4cm or less.

Smartphones are typically touchscreen devices running one of a number of operating systems, the most popular of which are:

- **Android**, developed by Google and licensed free of charge to any manufacturer. Key Android handset manufacturers include Samsung, LG, HTC, Motorola, Huawei and ZTE – some of whom also manufacture handsets for Google to distribute under its Nexus brand;
- **iOS**, developed by Apple and only available on Apple's iPhone, iPad and iPod Touch devices; and
- **Windows Phone**, developed by Microsoft and available primarily on its Microsoft Lumia handsets but also licensed free of charge to manufacturers such as Samsung, LG, HTC and Huawei.

In the three months to January 2016, Android handsets made up 52.6% of the Australian mobile phone market, with iOS on 41.2% and Windows Phone on 5.4%.[42]

Apple's share of mobile handset sales makes it the leading handset manufacturer in Australia, followed by Samsung with 30%. The five most-sold handsets in Australia in the three months to December 2015 were the iPhone 6s, the iPhone 6, the Samsung Galaxy S6, the iPhone 5s and the Samsung Galaxy S5.[43]

(b) Apps and app stores

Each of the major mobile operating system providers runs an app store through which apps for the relevant operating systems are sold and/or downloaded:

- the Google Play store sells Android apps;
- Apple's App Store sells iOS apps; and
- Microsoft's Windows Phone Store sells Windows Phone apps.

As at July 2015, Google Play offered 1.6 million apps, Apple's App Store offered 1.5 million apps, and the Windows Phone Store offered 300,000 apps. Google Play has reached 190 billion app downloads to date, while the Apple App Store has reached 100 billion downloads to date.[44]

However, while Google Play has achieved 90% more downloads than the Apple App Store, the Apple App Store has generated 80% more revenues than Google Play,[45] reaching a total of $25 billion by the end of 2014 including $10 billion in 2014 alone.[46]

Android also allows apps to be installed from outside the Google Play store, including through alternative app stores that may be developed by device

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41 Kantar WorldPanel data for the three months to August 2015.

42 Kantar WorldPanel data for the three months to January 2016.

43 "Kantar OS stats: Apple leads as top brand in US, China but Android grows in US, Europe", *IT Wire*, 27 January 2016.

44 *App Annie Index: Market Q3 2015.*

45 *App Annie Index: Market Q3 2015.*

46 "App Store Rings in 2015 with New Records", Apple press release, 9 January 2015.

manufacturers (such as Samsung's Galaxy Apps or the Amazon Appstore) or by third parties.

By contrast, Apple's App Store is generally the only way to distribute and install apps on Apple devices. Apple has broad discretion to reject apps from its App Store

(c) Access to device features

Smartphone operating systems each provide a documented application programming interface (**API**), which is a library of functions and frameworks that developers can use to access features of the operating system and device hardware in their apps.

Android and Windows Phone provide public APIs that facilitate access to the NFC controller (if present) and also provide advanced support for HCE services built into the operating system. As a result, any developer can easily supply a mobile payment or mobile wallet app that can take advantage of an Android or Windows Phone device's NFC capabilities to allow contactless mobile payments.

By contrast, Apple does not provide any public API for access to the NFC controller of its NFC-capable devices. As a result, at present only Apple can develop a mobile payment or mobile wallet app that takes advantage of the built-in NFC capability of recent Apple devices to allow contactless mobile payments.

3.4 Fees and charges – who pays for all the convenience of mobile payments?

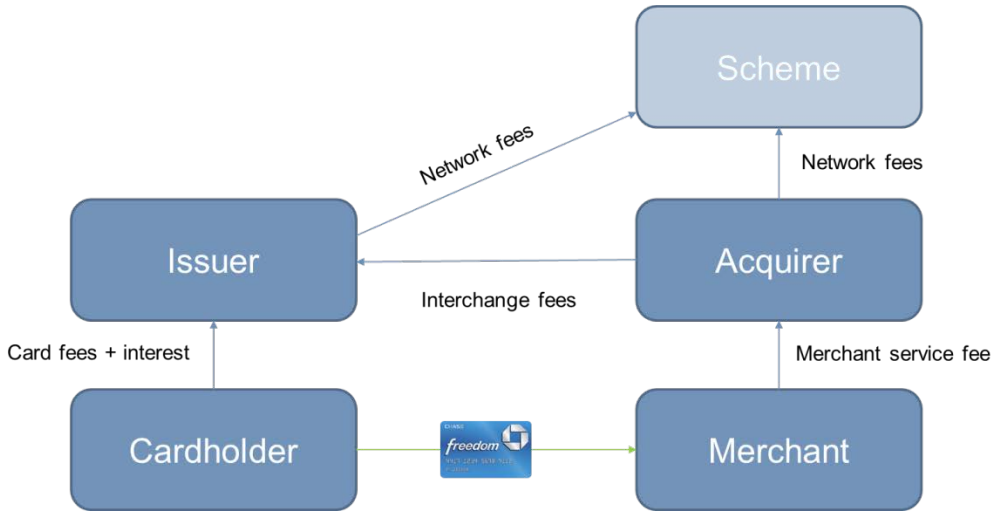
Mobile banking apps are typically offered to customers for free, as part of the basic suite of services offered by most banks. The cost of developing these apps is usually covered by each financial institution.

Similarly, mobile device manufacturers such as Apple and Samsung offer mobile wallets for free to encourage greater adoption and use of their mobile devices and ecosystems, which generate revenue chiefly through device sales.

Software providers such as Google provide mobile wallets to encourage greater adoption and use of their operating systems and associated software, which generate revenue chiefly through advertising sales.

Otherwise, in a typical retail transaction involving a debit or credit card scheme, there are a number of fees and charges that become payable between the different parties participating in the transaction. In particular:

- the cardholder may or may not pay a card surcharge to the merchant;
- the merchant pays a merchant service fee to the acquirer;
- the acquirer retains its processing fees and passes the rest to the card scheme for processing as an interchange fee;
- the card scheme passes the interchange fee to the issuer, net of any network fees it charges the acquirer and issuer; and
- the issuer may or may not return some of the interchange fee to the cardholder (eg, through reward points or other benefits).



Four-party scheme fees and charges

The level of interchange fees in Australia is capped, as per regulations imposed by the RBA.

A mobile payment made using a mobile wallet is typically made using a debit or credit card from one of the major card schemes (eg Visa or MasterCard). As such, it will usually involve all of the payment flows identified above. However, it may also require additional payments.

For example, it has been reported that in the US, UK, China and now Australia, Apple charges participating issuers a transaction fee every time a customer uses an issuer's card stored in the mobile wallet. It is reported that this transaction fee is collected by the card scheme on Apple's behalf, and effectively comes out of the interchange fee.

Apple reportedly prevents issuers from passing these transaction fees or any other costs of Apple Pay on to its customers. These fees vary by jurisdiction, but actual or proposed fees have been reported to be:

- in the United States, 0.15% for credit and 0.5 cents for debit;[47]
- in the United Kingdom, "a few pence per £100 transaction";[48]
- in China, 0.07% (deferred for two years);[49] and
- in Canada, 0.15% to 0.25%.[50]

At present, it is reported that Samsung does not charge issuers for participation in Samsung Pay and Google does not charge issuers for participation in Android Pay.

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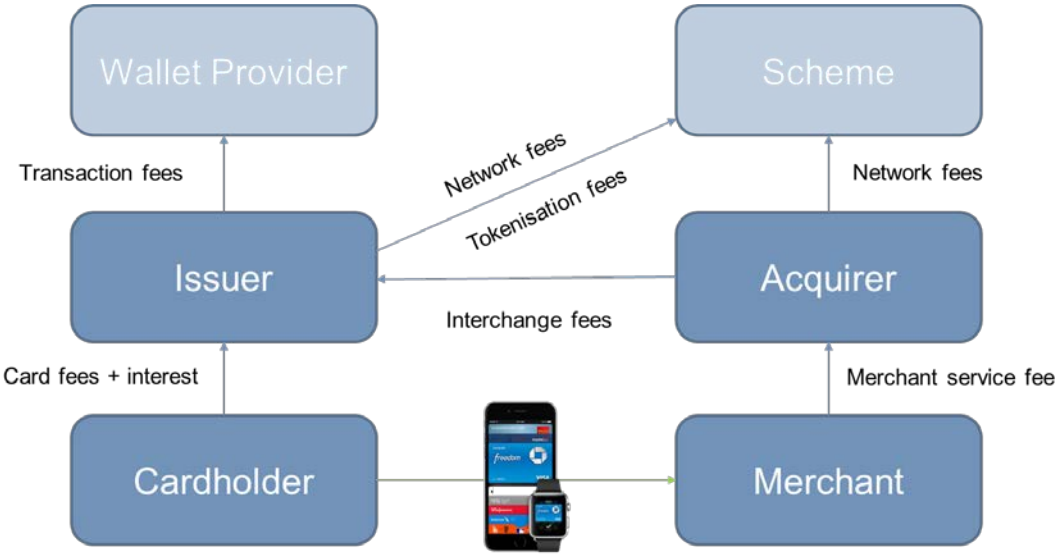
47 John Stewart, "Issuers' Apple Pay Pact Assigns Remarkable Authority to Card Networks As Well As Apple", *Digital Transactions*, 27 October 2014.

48 Martin Arnold, Andrea Felsted and Daniel Thomas, "UK banks put squeeze on Apple Pay fees", *Financial Times*, 14 July 2014.

49 "Chinese Banks to Pay Much Smaller Fees to Apple Pay than US Counterparts", *Caixin*, 22 February 2016.

50 Rita Trichur and Daisuke Wakabayashi, "Apple Pay Plans to Launch in Canada This Fall", *Wall Street Journal*, 17 April 2015.



Four-party scheme with mobile wallet

3.5 Mobile payments and mobile wallets internationally

The mobile wallet had its origins in services such as the *osaifu-keitai* smartphone wallet introduced by NTT DoCoMo in Japan in 2004. Osaifu-keitai uses a variant of NFC to make contactless payments at vending machines, on public transport and in restaurants and retail stores. However, only 10% of mobile subscribers use the system each month.

Mobile payments were introduced more recently but with greater impact in China, where they grew from less than $US25 billion in 2012 to $US900 billion in 2014. 36% of respondents in China report having used a digital wallet as at May 2015.[51] With 82% of the Chinese market, third-party wallet provider Alipay is now the world's largest mobile payments provider.[52] It mainly uses QR-code payments but is rolling out NFC payments.

Other countries are generally at an earlier stage of mobile payment adoption. For example:

- **United States**: NFC mobile payments have been available since 2011, but adoption has been limited by a number of factors. Mobile payments were initially driven by mobile network operators using SIM-based and embedded Secure Elements, but were only available on a limited number of mobile handsets exclusive to certain carriers and supported a limited number of card issuers. Further, merchant acceptance of contactless NFC card and mobile payments has been severely restricted, with the result that in May 2015 only 9% of Americans had made a contactless payment of any kind.[53] No early mobile wallet achieved significant success and many failed while still in trial phases or shortly after launch.

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51 RFi, *Global Payments Evolution*, May 2015.

52 "Alipay Overtakes PayPal As The Largest Mobile Payments Platform In The World", *Business Insider*, 14 February 2014.

53 RFi, *Global Payments Evolution 2015*.

However, since October 2014 new mobile wallets have been introduced in the form of Apple Pay, Android Pay and Samsung Pay. Apple Pay and Android Pay in particular have been active in encouraging merchant acceptance of NFC payments; while Samsung Pay uses both NFC and Magnetic Secure Transmission (**MST**), which will work with most traditional magnetic stripe terminals.

In October 2015, Capital One became the first US bank to offer NFC payments through its mobile app for Android, using HCE. 12% of respondents in the US report having used a digital wallet as at May 2015.[54]

- **United Kingdom**: the UK has seen relatively widespread adoption of contactless card payments, with 74.5 million contactless cards on issue and £758.6 million in contactless card payments in the month of September 2015.[55] At least 410,000 contactless-enabled merchant terminals have been deployed[56] including across the Transport for London network, and around 23% of the population are estimated to have made a contactless purchase.[57]

  As in the United States, a number of mobile network operators and banks have developed NFC-enabled mobile wallets or mobile banking apps for Android handsets using SIM-based Secure Elements and more recently using HCE. As in the United States, many of these services have closed. A number of other bank and third-party apps continue to facilitate online shopping payments and peer-to-peer payments.

  Apple Pay launched in the UK in July 2015 and is now available with all the major banks with Barclays being the last to join in April 2016.

  13% of respondents in the UK report having used a digital wallet as at May 2015.[58]

- **Canada:** like the UK, Canada has widespread contactless card adoption. By the end of 2014, over 70% of credit cards and 40% of debit cards in Canada supported contactless payment, with 30% of all point-of-sale devices and 80% of merchant devices in targeted categories NFC-enabled. Contactless transactions represented between 10% and 20% of total transactions.[59]

  Mobile payments in Canada have historically focused on SIM-based mobile payment solutions, which embed a Secure Element (**SE**) in a mobile network SIM card, and card issuers accordingly negotiate with one or more mobile network operators to provide these services to end users. It has been estimated that only 25% of consumers have all of the required elements to participate in mobile payments – including a compatible handset, a participating bank and an arrangement between that bank and the customer's carrier.[60]

  Two mobile wallets, Ugo and Suretap, have been launched as joint ventures by multiple card issuers with support for NFC payments on compatible handsets as

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54 RFi, *Global Payments Evolution*, May 2015.

55 UK Card Association, *Contactless Statistics,* September 2015.

56 Visa Europe, "1 billion Visa contactless purchases made in last year", 6 July 2015.

57 Deloitte Mobile Consumer Survey.

58 RFi, *Global Payments Evolution*, May 2015.

59 *Payments Security White Paper* at p 3–4.

60 at p 7.

well as QR codes and barcodes for stored loyalty cards and store cards.[61] At present each wallet represents only two issuers, but this may change.

In September 2015, the Royal Bank of Canada (**RBC**) became the first financial institution in North America to add HCE payments to its mobile wallet and banking app and allow NFC payments without either a SIM-based or embedded Secure Element.[62]

Apple Pay launched in Canada in May 2016 with all major banks now participating.[63]

10% of Canadians report having used a digital wallet as at May 2015.[64]

The applicants consider that the overseas experience suggests the following conclusions in relation to the adoption of mobile payments:

- **widespread merchant acceptance is critical:** particularly in the United States, mobile payments are limited by the low uptake of NFC-capable merchant terminals, requiring mobile wallet providers to negotiate with retailers to encourage acceptance;

- **it is better if technology is built into the device:** the need to attach an NFC sticker or tag, or to acquire and insert a specialised SIM card, appear to compromise the seamless user experience necessary for mobile payments to take the place of card payments or cash, and mobile wallets that rely on these mechanisms have not been successful overseas. NFC needs to be built into the device itself, and credentials need to be stored on a Secure Element embedded in the device, or securely in the cloud using HCE;

- **customer choice should be maximised:** ideally for the adoption of mobile payments, customers should be able to use the financial institution, mobile wallet, mobile device and mobile network of their choice. Providers in the US and the UK are now working to allow customers most of these choices, but particularly for Apple users choice between wallet providers remains limited; and

- **customer trust must be earned:** studies show that customers are worried about the security of mobile payments, including the risk of fraud and the use of personal information by mobile payment providers. Customers tend to trust banks in this regard far more than they trust mobile network operators or handset or operating system providers – though independent third-party wallet providers such as PayPal and Alipay can earn a high level of trust over time.[65]

The applicants consider that these lessons are highly instructive to the adoption of mobile payment and mobile wallet services in Australia, as discussed below. More information about the development of mobile payment and mobile wallet services is set out in Attachment A.

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61 "New mobile wallet apps prepare for Apple Pay's Canadian launch", *The Globe and Mail*, 4 August 2015.

62 "RBC brings HCE mobile payments to North America", *NFC World*, 14 September 2015.

63 "Canadian banks, including 'the Big Five', sign on for major Apple Pay expansion", *Financial Post*, 10 May 2016.

64 RFi, *Global Payments Evolution*, May 2015.

65 RFi, *Australian Digital Banking Program*, June 2015.

4 Relevant markets impacted by the proposed conduct

4.1 Introduction

The market impacted by the proposed conduct is the market in which mobile payment and mobile wallet services are supplied in Australia.

As discussed below, this is still an emerging market which has the potential to expand significantly over the next few years due to recent advances in mobile phone hardware and operating systems; widespread upgrades to merchant point-of-sale equipment; consumer adoption of contactless card payments; and the recent entry of global technology companies such as Apple, Google and Samsung into mobile payments.

However, while the entry of these global Third Party Wallet Providers into the Australian market presents an opportunity to bring mobile wallet and mobile payment services into the mainstream, it may also present risks to competition, innovation, security, transparency and efficiency if Australian financial institutions are not able to negotiate effectively in relation to these critical issues.

4.2 Current mobile payment options in Australia

Most of the Australian domestic banks offer a general mobile banking app for iOS, Android and many cases Windows Phone, generally featuring quick balance inquiries, money transfers by BSB and account number – and in some cases by mobile number – and bill payments. Surveys suggest that 55% of Australians have used mobile banking on their smartphones,[66] and that between [c-i-c] and [c-i-c] of each institution's customers perform banking tasks via mobile banking apps.[67]

Where NFC mobile payments are offered, these may be integrated into the main banking app – as is the case with Commonwealth Bank and Westpac's Tap & Pay functionality for compatible Android phones – or linked to a separate wallet app.[68]

Bank	Mobile payment options	Adoption	Cost
CBA	NFC payments are integrated with general banking app for Android 4.4+ phones (using HCE). NFC payments via external NFC sticker can be enabled or disabled within banking app on any non-NFC handset (iOS & Android). BankWest offers peer-to-peer transfers within general banking app.		[c-i-c]

66 Deloitte Mobile Consumer Survey 2014.

67 RFi ADBP March 2015. Breakdown is [c-i-c].

68 NFC payments that use external NFC stickers, tags or phone cases may be enabled or disabled using the mobile banking app, but further integration is limited as the app has no direct communication with the external NFC mechanism.

Westpac	NFC payments are integrated with general banking app for 11 Samsung models (using eSE). Pre-order and pay at cafes participating in Beat the Q/Hey You linked to general banking app. [c-i-c]	[c-i-c] customers spending [c-i-c] per month and growing at [c-i-c] per month. [c-i-c]	[c-i-c] [c-i-c]
NAB	NAB Flik app for iOS and Android allows peer-to-peer payments via mobile number, Facebook, QR code or NFC between compatible devices running Flik. NAB Pay for Android allows contactless NFC payments on compatible devices.	[c-i-c] [c-i-c]	[c-i-c] [c-i-c]
Bendigo	Redy mobile wallet app allows QR payments and integrated reward program at participating merchants. NFC payments through integration with Android Pay on Android 4.4+ phones.	[c-i-c] [c-i-c]	[c-i-c] [c-i-c]

Additionally, the following providers have announced or launched mobile payment services in Australia:

Provider	Mobile payment options
Optus	Cash By Optus provides mobile customers with compatible Android devices and an Optus NFC SIM (using SIM SE), or an NFC sticker or NFC wristband, to pay using a virtual Visa prepaid card loaded from a linked bank account.
Coles	NFC payments via Pay Tag external NFC sticker can be enabled or disabled within general mobile banking app on iOS and Android.

4.3 Expected future developments

The applicants anticipate that, in the right competitive environment, the use of contactless mobile payments has the potential to match the current use of contactless card payments, as the clear trend is increasingly to replace physical cards with virtual cards.

Prior to the introduction of any Third Party Wallet in Australia in November 2015, it was estimated that there are around 400,000 to 500,000 contactless mobile payment users in Australia, spending around $8 million per month and growing at a rate of 8% per month.[69] Yet, research from RFi and Visa highlighted that only 8% of Australian smartphone owners had made a mobile payment.[70] Of those who had made a mobile payment, [c-i-c] used CBA's Tap and Pay, [c-i-c] used Westpac's Tap and Pay, [c-i-c] used Coles's Pay Tag and [c-i-c] used other mobile wallets.[71]

Australia's low use of digital wallets despite its widespread adoption of contactless payments was explained by a lack of access to digital payment products:

> [A] clear pathway from cash to digital payments via contactless card payments is becoming apparent in a number of countries, with contactless card usage often acting as a stepping stone to digital payments. In fact, in some countries it appears that the last remaining barrier to uptake of digital payments is accessibility. Australia, for example, is one of the success stories for contactless, but a lack of readily available and easily accessible digital payment products appear to be preventing consumers from taking the next step in terms of payments evolution.[72]

The applicants agree that the range of mobile payment services currently available in Australia (and described above) are not sufficient to drive the adoption of mobile payments in Australia for the following reasons:

- mobile wallets need to become more widely available, and particularly available to the customers more likely to drive adoption;
- customers need to feel confident that mobile wallets will be safe and secure; and
- there has to be more competition in the market to ensure different customer needs and preferences are catered for.

As discussed below, the introduction of Third Party Wallets in Australia represents a significant opportunity for the industry – but only if those Third Party Wallets are introduced in a way that maintains competition and maximises innovation and customer choice.

4.4 How Third Party Wallets could change the market for mobile payments in Australia

Apple has a track record and a reputation for bringing emerging technologies into the mainstream by making them simple, attractive and user-friendly and marketing them effectively. Portable music players existed before the iPod, and smartphones existed before the iPhone, but Apple transformed them from niche products for technology enthusiasts to mass-market products for everyone. Apple's influence in technology sectors is further discussed in Attachment B.

As Apple's closest competitors in operating systems and smartphones respectively, Google and Samsung have similarly refined and streamlined their products and services with an emphasis on design, build quality and user experience. With Apple, Google and

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69 Estimates provided by applicants.

70 RFi, *Global Payments Evolution 2015.*

71 RFi, *Global Payments Evolution 2015.*

72 RFi, *Global Payments Evolution 2015.*

Samsung all now offering mobile wallets internationally, there is now a great opportunity for mobile payments to emerge from the niche into the mainstream.

(a) Apple Pay

Apple Pay was announced along with Apple's NFC-enabled iPhone 6, iPhone 6 Plus and Apple Watch on 9 September 2014. Apple had reportedly developed the service largely in secret with Visa, MasterCard and American Express since January 2013, and had approached major US issuers Bank of America, Capital One, Chase, Citi and Wells Fargo mid-2013 without disclosing to any of them which other banks were involved.[73]

The service became available on 20 October 2014, by which time more than 500 additional US banks and credit unions had signed on to offer Apple Pay. By June 2015 more than 2500 banks and credit unions had signed up. Apple reported that more than one million credit cards had been added to the system in the first 72 hours.

Prior to launch, contactless payments were not widespread in the United States, and Apple has continued to work with national retailers and point-of-sale payment providers to increase rollout of contactless payments, helping to lift compatible Apple Pay locations from 220,000 at launch to 700,000 by March 2015 and projections of 1.5 million by the end of 2015.[74] In January 2015 Apple reported that $2 out of every $3 in contactless credit card payments made since launch had been made using Apple Pay.[75]

By October 2015, Apple Pay accounted for 1% of physical store transactions or around $US5.2 billion in sales, and three-quarters of all contactless payments in stores.[76]

Apple Pay launched in the UK on 14 July 2015. When the UK expansion was announced, all of the major banks were included with the exception of Barclays, which was reportedly focusing on its own contactless payment hardware including key fobs and wristbands.[77] After a significant degree of customer pressure including on social media, Barclays announced on launch day that it would be bringing Apple Pay to its customers "in the future" and launched in April 2016.[78]

In February 2016 Apple announced that Apple Pay had launched in China with support from China's card association, UnionPay, and 19 of its member issuers.[79] Apple is reportedly charging issuers a lower fee in China than in the United States

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73 Nathaniel Popper, "Banks Did It Apple's Way in Payments by Mobile", *New York Times*, 11 September 2014.

74 "Apple Pay to hit Starbucks Stores this year", *Wall Street Journal*, 8 October 2015.

75 Tim Cook, Q1 2015 Earnings Call Transcript, 27 January 2015.

76 "Why Apple Pay's Slow Start Doesn't Mean It's a Failure", *MIT Technology Review,* 6 October 2015.

77 "Barclaycard steps up its contactless game with three new NFC devices", *Engadget,* 29 June 2015. When the Apple Pay UK launch was announced on 9 June 2015, Barclays told its customers "We can assure you that we've been talking to Apple about how our customers could use Apple Pay in addition to our existing mobile and payment services, and that these talks remain constructive".

78 "Barclays is going to support Apple Pay early next year", *Business Insider*, 8 October 2015.

79 Apple, "Apple Pay has expanded to China", 17 February 2016.

– 0.07% of transaction value compared to 0.15%, and possibly less[80] – and deferring collection of any payments for two years.[81]

On 27 October 2015, Apple announced that it had agreed with American Express to launch Apple Pay in a number of territories, including Australia and Canada in 2015 and Spain, Singapore and Hong Kong in 2016.[82] Under these arrangements, Apple Pay will be available to cards issued directly by American Express in these territories, but not to American Express "companion" cards issued by banks. American Express is not accepted as widely by merchants in Australia as the Visa and MasterCard schemes. This is largely because the merchant fees charged by American Express are unregulated and are significantly higher than the regulated interchange fees charged by Visa and MasterCard.

Apple Pay launched with American Express in Canada on 17 November 2015, in Australia on 19 November 2015 and in Singapore on 19 April 2016. It launched with ANZ in Australia for Visa and companion American Express cards on 28 April 2016. It launched with the "big five" Canadian banks with Visa, MasterCard, Interac and companion American Express cards on 10 May 2016, and with Visa and MasterCard cards issued by five major banks in Singapore on 25 May 2016.[83] In July 2016 it launched in Switzerland with three initial card issuers,[84] in Hong Kong and in France.

Further details about the development and operation of Apple Pay are set out in Attachment C.

(b) Android Pay

Android Pay launched on 10 September 2015 in the US and on 18 May 2016 in the UK. It requires an NFC-capable smartphone running Android 4.4 KitKat and will work in all NFC-enabled merchant outlets – up to 1 million outlets at launch.

Android Pay launched in Australia on 14 July 2016 with support for cards issued by ANZ, American Express, Macquarie and a number of regional banks and credit unions.[85]

In the US, Google has not dealt with issuers on an exclusive basis on Android devices. For example, Capital One has recently launched its own NFC-capable banking and mobile payments app using HCE,[86] and is also listed as "Coming soon" to Android Pay.[87] Access to the NFC hardware on Android devices is provided by a documented API which provides easy access to NFC functionality including built-in HCE.

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80 "As Apple Pay Debuts in China, A State-Run Newspaper Voices Support", *Wall Street Journal,* 23 February 2016.

81 "Chinese Banks to Pay Much Smaller Fees to Apple Pay than US Counterparts", *Caixin*, 22 February 2016.

82 Apple Earnings Report: Q4 2015 conference call transcript, 27 October 2015.

83 "Five major banks in Singapore now work with Apple Pay", *Straits Times*, 25 May 2016.

84 "Apple Pay now available in Switzerland", Apple Press Release, 7 July 2016.

85 "Google launches Android Pay in Australia", *Sydney Morning Herald*, 14 July 2016.

86 "Android Users Can Now Make Mobile Payments Directly in the Capital One Wallet App", Capital One press release, 15 October 2015. See also description of the Capital One Wallet app in the Google Play store: "Make purchases directly from your eligible credit and debit cards with a NFC enabled mobile device (KitKat 4.4+)."

87 Android Pay website, <http://android.com/pay> accessed 12 November 2015.

Google does not charge issuers transaction fees for participating in Android Pay.[88] It uses the Visa Digital Enablement Program and the MasterCard Digital Enablement Express program, both of which provide tokenisation services for free and do not pass through transaction fees to financial institutions.[89]

(c) Samsung Pay

Samsung Pay launched in South Korea on 20 August 2015, in the United States on 28 September 2015, in China on 29 March 2016, in Spain on 2 June 2016, in Australia on 15 June 2016 and in Singapore on 16 June 2016. It requires a recent Samsung phone or the Samsung Gear S2 smartwatch, which can be paired with a range of Android handsets. In South Korea, total registrations reportedly reached 500,000 users in the month since launch, representing more than $US30 million over 1.5 million total transactions.[90]

As well as NFC capability, Samsung's most recent handsets also support Magnetic Secure Transmission (**MST**), which generates magnetic fields to emulate swiping a card through a reader. As a result, Samsung Pay can be used at any terminal that reads magnetic stripe credit cards.

Samsung also intends to roll out Samsung Pay to the UK, though it does not have a timeline. It launched in Australia with cards issued by American Express and Citibank.[91]

In the US, Samsung Pay does not have technological or other exclusivity on Samsung devices: for example, Android Pay is available on those devices alongside Samsung Pay and other NFC apps such as the Capital One Wallet app.[92] Access to the NFC hardware on Samsung devices is provided by the standard Android API which provides easy access to NFC functionality including built-in HCE. However, access to the Magnetic Secure Transmission (**MST**) hardware in recent Samsung Galaxy handsets does not appear to be available to third-party developers at present.

Samsung does not charge issuers transaction fees for participating in Samsung Pay.[93] Like Android Pay, it uses the Visa and MasterCard Digital Enablement programs, which provide tokenisation services for free and do not pass through transaction fees to financial institutions.[94]

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88 "Google misses out on Apple's slice of mobile transactions", *Wall Street Journal*, 5 June 2015.

89 "Visa Announces New Commercial Standard for Mobile Payments ", Visa press release, 28 May 2015; "Google Will be Joining MasterCard Digital Enablement Express Program to Speed Go-To-Market for Android Pay", MasterCard press release, 8 September 2015.

90 "500,000 subscribers to Samsung Pay creates anticipation for US debut", *Business Korea,*17 September 2015 at http://www.businesskorea.co.kr/ict/news/12110-samsung-storm-500000-subscribers-samsung-pay-creates-anticipation-us-debut

91 "CES 2016: Samsung Pay heads to Australia", *Australian Financial Review,* 8 January 2016; "Samsung Pay goes with Amex first", *Sydney Morning Herald*, 22 February 2016; "Samsung Pay takes on Apple over tap and go", *Australian Financial Review*, 15 June 2016.

92 "Capital One adds NFC mobile payments to wallet app", *NFC World,* 15 October 2015.

93 "Samsung Pay works almost anywhere your credit card does", *The Verge,* 13 August 2015.

94 "Samsung Joins the Visa Digital Enablement Program ", Visa press release, 13 August 2015; "MasterCard Works with Samsung to Deliver Samsung", MasterCard press release, 1 March 2015.

(d) Conclusion

All of these wallets are provided by significant global brands – in some surveys the three most valuable brands in the world[95] – and between them will be able to load credit and debit cards from a wide range of financial institutions on the major smartphone platforms and devices. This has the potential to address a number of the issues currently limiting mobile payment adoption in Australia.

A Third Party Wallet introduced on a widespread but exclusive basis by any of these Third Party Wallet Providers is very likely to become and remain the dominant provider on that platform even if exclusivity is later removed or reduced. Exclusivity at the widespread launch of a Third Party Wallet will prevent or inhibit competition and innovation at the most critical point in the development of the market.

Similarly, a Third Party Wallet introduced on a widespread basis without reference to the standards being developed by the Australian industry (and further discussed below), or in circumstances that restrict price transparency in the provision of these services, would be detrimental to industry growth and overall market competitiveness.

In this context, the proposed conduct is intended to increase the prospects of competition and innovation, security and price transparency in mobile payment and mobile wallet services, and to realise the full potential of the opportunity presented by the introduction of Third Party Wallets in Australia.

5 Future with and without

The most likely future **with** the proposed conduct the subject of the application for authorisation is one in which the applicants collectively negotiate key issues relating to the introduction of Third-Party Wallets in Australia, with the result that some Third Party Wallets:

- may be introduced to Australia on a non-exclusive or only partially exclusive basis, in a way that reflects Australian industry standards and best practice principles, and do not restrict the ability for issuers to pass on the costs of the mobile wallet platform; or
- if collective negotiations are unsuccessful, may only be introduced to Australia on an exclusive basis that may restrict the payment services available through those Third Party Wallets.

Based on the experience overseas, the most likely future **without** the proposed conduct is that some card issuers will agree to some Third Party Wallets being introduced into Australia on an exclusive basis, without reflecting Australian industry standards and best practice principles, and/or subject to restrictions on the ability to pass through fees imposed by the platform, reducing the potential for users of Third-Party Wallets to be given the appropriate pricing implications of their choice of payment services. The "take it or leave it" approach to exclusivity will particularly affect the Australian financial institutions that have invested the most in offering mobile payment services and developing mobile wallet applications, and would have to forego offering their own

[95] *Forbes,* "The world's most valuable brands", 2015.

competing services as a consequence of exclusivity, putting investment in developing and offering these services at particular risk. Other issuers may decide not to offer some Third Party Wallets at all.

The public benefits and potential public detriments of the future with the proposed conduct, relative to the future without the proposed conduct, are addressed below.

6 Public benefits

6.1 Greater competition in mobile payments

Ensuring that Third-Party Mobile Wallets are introduced in Australia on a non-exclusive basis will increase competition, customer choice and confidence, innovation and investment in mobile wallet and mobile payment services across the industry.

A minimum level of investment in mobile wallet and mobile payment services is likely to continue even if the addressable market is limited to the users of a particular mobile platform (eg, limited to Samsung or other Android users only). However, limiting the level of choice and competition for users of a platform representing a major segment of the mobile phone market would delay and distort the mainstream adoption of mobile payments in Australia by restricting customer choice and confidence in the system.

In contrast, ensuring that the market remains open and competitive for all users would significantly promote the development of new and innovative mobile wallet and mobile payment services that will compete with each other for the ultimate benefit of consumers. Given the economies of scale and scope in developing for multiple mobile platforms, allowing competition in an additional mobile platform – such as the iPhone – is likely to benefit users of all mobile platforms.

(a) Increased competition

If the applicants are able through negotiation to achieve the introduction of Third-Party Mobile Wallets in Australia on a non-exclusive basis, competition between different mobile payment and mobile wallet services is likely to increase both on particular platforms and across the industry.

Competition will ensure that ultimately it is customers who will decide what kinds of mobile wallet and mobile payment services will be available in the market and what forms they might take.

However, if a Third Party Wallet is introduced on an exclusive basis, then the only choice available will be the choice of the Third Party Wallet Provider. In the case of Apple Pay, this will take the form of a single Wallet app that stores only a limited range of payment credentials and loyalty cards; while no other apps will be able to offer integrated contactless mobile payments (or related card services).

Competition will also ensure that these services are provided at efficient prices. Although consumers may be unaware of the prices paid by merchants and issuers to participate in mobile payment and mobile wallet arrangements, they are likely to pay for inefficient prices through increased retail prices and bank fees, higher interest rates or a reduction in credit card benefits such as reward points or interest-free payment periods. This would result in distorted prices signals and inefficient outcomes, an issue that has been a particular area of concern for the RBA (and which the RBA has sought to address through its various reforms of the Australian payment system).

Competition on all platforms will give mobile wallets and mobile services in Australia the best chance to reach the mainstream by giving customers choice from service providers they trust. By contrast, excluding competition from certain mobile platforms is likely to slow and distort mainstream adoption.

Further, any Third Party Wallet introduced into Australia on an exclusive basis, it could remain the dominant mobile wallet on that platform even if exclusivity is later removed or reduced. If customers have switched from contactless card payment to a Third Party Wallet with widespread adoption, it may be difficult for other mobile payment services to persuade those customers to switch again once exclusivity is lifted.

In these circumstances, it will be important to allow negotiations to resist the consequence that Third Party Wallets are introduced under conditions that will limit competition simply because of the Third Party Wallet Provider's bargaining position.

(b) Increased customer choice

If a Third Party Wallet is introduced into Australia on a widespread basis as the only mobile wallet on a particular mobile platform, users of that platform will be able to choose which credit and debit cards they will load into that Third Party Wallet and which of these credit and debit cards will be used as their default payment method.

However, users will not be able to choose a mobile wallet that may suit their preferences better, such as:

- an integrated mobile banking app that offers increased functionality over a general wallet app, for example by:
  - displaying their account balances and credit limits to assist them in selecting the most appropriate payment method;
  - assisting them to transfer money between their accounts in order to complete a payment without going into overdraft or incurring interest charges; or
  - allowing them to change their security settings where necessary, for example to selectively allow overseas payments; or
- a standalone wallet app provided by a bank or another third-party wallet provider that may offer increased functionality, such as:
  - storing identity credentials such as drivers' licences, Medicare and health insurance cards, library cards and gym membership cards;
  - receiving digital receipts, or scanning and storing physical receipts; or
  - allowing customers to instantly sign up for loyalty cards.

Customer research in Australia shows significant variance in customers' preference for the location of mobile wallet services, with 66% reporting that they would prefer

them to be partly or fully integrated with a bank's existing mobile banking app. [96] In particular:

- 54% of customers would prefer mobile wallet functionalities to be fully integrated with a bank's existing mobile banking app, requiring a user to log in to access the digital wallet as well as other mobile banking functions;
- 12% of customers would prefer these functionalities to be partly integrated with a bank's mobile banking app, not requiring a user to log in to access the digital wallet; and
- 34% of customers would prefer a standalone mobile wallet app, whether provided by an individual bank or by a wallet supplier such as Apple, Google or Samsung.[97]

The ability of the banks to negotiate effectively in relation to competition, and to increase the likelihood that alternative mobile payment solutions will be available on all mobile devices, will significantly increase customer choice and satisfy customer preferences as to the way they access mobile wallets on their mobile devices.

(c) Greater customer confidence

Customer research has shown that Australian customers do not have a great degree of trust in operating system providers such as Apple and Google to provide mobile payment services with the necessary security, but trust major Australian financial institutions significantly above all other potential providers including Visa and MasterCard, PayPal, mobile carriers, newly launched banks, foreign banks in Australia, or Facebook.[98]

These findings are consistent with international research, which has repeatedly shown that customers trust their own bank the most to provide mobile payments.[99] For example, a 2014 survey found that:

> Over two-thirds of the respondents said they would rather use a mobile app from a bank, versus less than a third who said they would opt for Apple Pay…[100]

The ability of the banks to negotiate effectively in relation to competition, and to increase the likelihood that alternative mobile payment solutions will be available on all mobile devices, will greatly increase the opportunity for customers to choose a mobile payment solution they can trust.

(d) Greater potential for innovation

The applicants recognise that a minimum level of investment and innovation in mobile wallet and mobile payment services will continue even if a significant portion of the market is excluded from those services. A number of the applicants are developing or have developed apps with mobile wallet capabilities, including:

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96 RFi, *Australian Digital Banking Program*, June 2015.

97 RFi, *Australian Digital Banking Program*, June 2015.

98 RFi, ADBP June 2015.

99 "Consumers trust their bank most to provide a mobile wallet", *Business Insider*, 13 April 2013.

100 "Consumers trust banks over Apple for mobile payments", *MediaPost*, 14 November 2014.

- mobile banking apps for multiple platforms which also enable mobile wallet capabilities on NFC-enabled Android handsets only; and
- standalone mobile wallets for the Android platform only.

However, the applicants consider that collectively negotiating with Third Party Wallet providers to allow other mobile wallet and mobile payment services to offer the choice of their services all platforms will improve efficiencies and allow for significantly greater investment in these services, resulting in:

- more frequent updates, including to maintain compatibility with and take advantage of new hardware and operating system developments such as:
  - additional biometric factors (face, iris or fingerprint recognition);
  - new screen sizes, dimensions and resolutions;
  - new input methods such as pressure-sensitive touch and gesture recognition;
  - additional or secondary screens; or
  - integration with wearable technology such as smart watches;
- additional features based on industry developments and user preference, such as:
  - the addition of new forms of stored value and identification credentials; and
  - value-added services that provide all information relevant to a payment before and after the payment is made;
- support for, and testing of, a greater range of handsets;
- increased marketing and advertising encouraging adoption and full use of mobile payment and mobile wallet services; and
- better trained and more responsive customer service.

The costs of developing, maintaining and participating in mobile wallets and mobile payment services, and the economies and efficiencies available where these costs may be allocated across multiple platforms, are discussed below.

(e) Increased incentives for investment

Mobile wallets and mobile payment services require substantial investment both for providers to develop and maintain, and for issuers to integrate and participate in (even if the wallet has been developed by another provider). Typical costs of mobile wallets and mobile payment services include:

- the scoping and development of the user-facing app;
- ongoing maintenance to address stability issues, optimise for operating system updates, and respond to user feedback;
- the development of new back-end systems and integration with existing back-end systems; and

- customer support.

Developing a mobile wallet or mobile banking app for multiple platforms can be considerably more cost-effective than for a single platform, particularly where:

- each additional platform has a sufficient user base to justify the incremental cost of developing for that platform; and
- the decision to develop for multiple platforms is made early in the development process.

Android, iOS and Windows Phone apps are all typically written in different programming languages and need to integrate with specific functions of their respective operating systems. However, these are fairly similar in their underlying structure and tools and development environments are available that can help developers translate between the languages or create the core logic of an app using an abstracted language that can then be tailored for each platform.

For example, Google has developed and released free to the public a tool designed to translate between Android apps and iOS apps.[101] Microsoft has also recently announced public tools to bring iOS apps to its Windows 10 platform.[102] Cross-platform development environments such as Xamarin, now also owned by Microsoft, promise up to 90% code reuse across Android, iOS and Windows.

A number of the applicants have designed their mobile banking and mobile wallet apps to be modular in nature so that they can be deployed to new mobile operating systems at a fraction of the cost of developing a new platform from scratch.

Apart from the coding of the app, the development of new back-end systems and integration with existing back-end systems will typically be common to all platforms, allowing for significant economies of scale with each new platform introduced.

The applicants estimate that up to [c-i-c] of the total development and back-end costs associated with their mobile wallet apps can be distributed across multiple platforms. Where features and user experience are consistent across platforms, greater efficiencies can also be obtained in marketing and customer support.

Because of these economies and efficiencies, the incentives for investment in mobile wallets and mobile payment services in Australia will be greater where these services can be deployed across multiple platforms.

(f) Conclusion

The full potential of mobile payment and mobile wallet services and the shape that innovation may take in the future are difficult to predict. However, the potential for mainstream adoption and innovation is likely to be much greater if a number of participants are able to develop these services in competition with each other across all major platforms, increasing customer choice and confidence in the system.

The recent Financial System Inquiry recommended that:

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101 "J2ObjC: A Java to iOS Objective-C translator", *Google Open Source Blog*, 13 September 2012.

102 "Huge news: Windows 10 can run reworked Android and iOS apps", *The Verge*, 29 April 2015.

Industry and government can work together to identify innovation opportunities and emerging network benefits. Where competitive forces prevent these opportunities from being fully realised, government should facilitate industry coordination. The Inquiry recommends establishing a permanent public–private sector collaborative committee to facilitate financial system innovation and enable timely and coordinated policy and regulatory responses.[103]

On 20 October 2015 the Commonwealth Government responded to the Financial System Inquiry, accepting all but one of its recommendations and acknowledging that "[n]ew payment methods… promise enormous opportunities, if properly harnessed." The applicants submit that the limited collective bargaining sought in this application would be consistent with this policy intent and would promote the public benefits identified in this application.

6.2 Compliance with industry standards and best-practice principles

The Australian payments industry has developed guidelines to reflect best-practice principles in relation to fraud prevention, security and customer identification and verification. Best-practice guidelines have been developed through the Australian Payments Clearing Association (**APCA**), which has a long history of developing standards and guidelines for the Australian payments industry.[104]

A similar effort has recently been undertaken in Canada, based on concerns that apply equally to the Australian industry (see case study below).

Industry guidelines are particularly important in payments because the safety and integrity of the entire payment system, as well as customer, merchant and industry confidence in a particular payment method or scheme, depend on all participants implementing appropriate measures to ensure that the system is secure at every stage of the payment process. For example, new CVMs, such as biometric verification at the time of purchase, will do little to increase security if the initial customer ID&V is inadequate – and the adequacy of particular ID&V methods for an entire system will be affected by the ID&V method of the weakest participant in the system. In addition, the results of biometric verification in a Third Party Wallet will be available to the Third Party Wallet Provider but not to the card issuer, reducing its reliability in preventing fraud.

Having appropriate industry guidelines is particularly important in a context where Third Party Wallets present card issuers and Third Party Wallet Providers with unique challenges and risks. Not only is this a new area of development, but there are inherent tensions between the incentives of:

- the Third Party Wallet Provider – who will want to make the onboarding and customer ID&V processes as frictionless as possible, but will not be liable for fraud if those processes turn out to be inadequate; and

- the card issuer – who will be liable for card fraud.

As the Canadian White Paper notes:

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103 Financial System Inquiry, Final Report at p 144.

104 APCA, "Third party digital wallet security: Card Issuer guidelines", 24 May 2016.

Participation in open mobile wallets may require the issuer to "outsource" key aspects of the solution to the wallet provider. Issuers will continue to manage the relationship with the customer, and should consider reviewing all digital credential requests received from open mobile wallet providers. Robust ID&V will be critical to protect consumers against account takeover fraud. Even an open mobile wallet with strong transaction security can be compromised if a payment credential is fraudulently loaded.

As part of the registration process, issuers should consider requesting a minimum set of data pertaining to the device, wallet application, and verification method (e.g., fingerprint, passcode). This data will support strong binding between the consumer, the payment credential, the device, and the wallet application that can support transaction authorization decisions.[105]

[105] Payments Security White Paper, 13 July 2015, p 32-33.

Case study: Canada

In December 2011, the Payments System Review Task Force appointed by the Minister of Finance called on the Canadian Government to partner with the private sector to create a state-of-the-art mobile payments ecosystem:

> We are early adopters of smart phones and tablets, and we are among the world's heaviest users of the Internet, and online banking and shopping. Why then, are mobile payments largely absent in Canada?
>
> Canada is already a leader in near-field communications (tap, or proximity payments) with 11 per cent penetration at the point of sale. Such devices are among the busiest terminals in Canada, found in retail and service industries consumers rely on, such as grocery stores, gas stations, restaurants and coffee shops. This reality demonstrates that Canadians are ready for a revolutionary shift in lifestyle. Yet, we lag.
>
> The next wave in consumer payments will come from new mobile technologies. To take advantage of these innovations, government and industry must create the right conditions for the technology to thrive. The Task Force was encouraged by the willingness of the banks and carriers to open their discussions to the rest of the payments industry and to retailers to create a mobile commerce environment for consumers. But much more needs to be done to expand the discussion as the next battle is going to be over who owns the mobile wallet.[106]

In May 2012, the Canadian banking industry and credit union system announced a set of voluntary guidelines for the development of mobile payments at the point of sale, the *Canada Mobile Payments: NFC Mobile Payments Reference Model* (**Mobile Reference Model**) with the following vision statement:

> The vision for mobile payments in Canada is a convenient, open, safe and secure ecosystem supported by standards based operating framework. This framework will increase user choice and accelerate the adoption of mobile payments.[107]

The Mobile Reference Model provides a wide range of standards for the development of mobile wallets, including standards of openness and interoperability; wallet features and functionality; customer verification for low- and high-value transactions; electronic receipts; provisioning and installation; data security and fraud.

In July 2015, the banking industry published a *Payments Security White Paper* (**Canadian White Paper**) highlighting the need to maintain the highest level of payment security, promote competition and support innovation based on the principles of:

- **security**: maintain the level of security that consumers and retailers have come to expect from payment system providers in Canada;
- **openness**: create and support an open mobile payments environment that allows consumers to pay for goods and services using any mobile wallet on any mobile device, leveraging the contactless payment terminals that many retailers already have; and
- **innovation**: support innovation in mobile payments by creating an environment that promotes consumer choice and is conducive to the development, evaluation and introduction of new products and services.[108]

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106 Task Force for the Payments System Review, *Moving Canada into the Digital Age*, December 2011, at p 7.

107 at p 4.

108 *Payments Security White Paper* at p 2.

The rate of fraud experienced in the US when Apple Pay was first launched is a good example of how a poorly designed on-boarding process can materially increase fraud risk. Initially, fraud rates of up to 6% were reported by some banks, compared to 0.1% for all card transactions.[109] The flaws in the onboarding process have been explained as follows:

> The vulnerability in Apple Pay is in the way that it — and card issuers — "onboard" new credit cards into the system. Because Apple wanted its system to have the simplicity for which it has become famous and wanted to make the sign-up process "frictionless," the company required little beyond basic credit card information about a user. Nor did it provide much information to the banks, like full phone numbers and addresses, that might help them detect fraud early.
>
> The banks, desperate to become their customers' default card on Apple Pay — most add only one to their iPhones — did little to build their own defenses or to push Apple to provide more detailed information about its customers. Some bank executives acknowledged that they were so scared of Apple that they didn't speak up. The banks didn't press the company for fear that they would not be included among the initial issuers on Apple Pay….[110]

It has also recently been reported that different Third Party Wallets may take different approaches to "rate limiting" attempts to guess details such as the card verification value (**CVV**) number, which can allow these guesses to be automated through brute-force attacks. Although these kinds of attacks could be detected by the issuers' systems, it would be more effective if they were prevented by the mobile wallet software itself.[111]

Without appropriate onboarding and ID&V processes, biometric CVMs such as fingerprint identification will not be sufficient to prevent fraud.

Liability for fraud is determined by the rules of each card scheme in a given jurisdiction and is not affected by the addition of a mobile wallet or mobile payment app to the process. Liability usually rests with the card issuer, though it may shift to the acquirer or merchant in some circumstances when the fraud results from a failure of the merchant to upgrade its equipment to the EMV standard. None of these circumstances apply in relation to NFC payments, which cannot be completed without EMV-capable equipment. However, they may apply in relation to the Magnetic Secure Transmission (**MST**) used in Samsung Pay, which emulate a magnetic swipe transaction and can be completed on older point of sale terminals that do not meet the EMV standard.

The Australian industry has developed guidelines to address these issues. As well as robust ID&V and CVM, these guidelines address the appropriate use of tokenisation, compliance with data security and privacy obligations, and adequacy of disclosure permissions.

Collective negotiation will seek to make sure those guidelines are applicable to all transactions (ie, it will seek to ensure that Third Party Wallet Providers comply with any industry guidelines that may be in operation at the time of negotiation). Where guidelines do not yet address a particular issue, the applicants will seek to negotiate to ensure Third Party Wallet Providers comply with best practice principles that preserve the safety, security and stability of mobile payments systems in Australia.

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109 "Fraud Comes to Apple Pay", *Wall Street Journal,* 3 March 2015.

110 "Pointing fingers in Apple Pay fraud", *New York Times* 16 March 2015.

111 "Here's Proof Apple Pay Is Useful For Stealing People's Money", *Forbes*, 1 March 2016.

6.3 Ability for greater price transparency in payments

As discussed above, it has been reported that in overseas jurisdictions Apple has prohibited participating institutions from passing on the costs of using Apple Pay. In effect, issuers are required to cross-subsidise the cost of Apple Pay.[112]

If a Third Party Wallet Provider were to adopt a similar position in Australia, this would be analogous to the credit card schemes' historical prohibition on merchant surcharges for card transactions.[113] While "no surcharge" rules are popular with credit card users and can drive the adoption of credit card schemes, it has long been recognised that these rules create inefficiencies. As the ACCC and Reserve Bank of Australia found in 2000:

> The operation of 'no surcharge' rules has been the subject of a number of official enquiries in Australia and overseas. All have concluded that the rules are not in the public interest…
>
> The study's view is that 'no surcharge' rules suppress price signals that guide the efficient allocation of resources. They result in cross-subsidisation of cardholders by consumers who do not use credit cards; they restrict competition between merchants by limiting the range of pricing strategies they can use; and they prevent end-users exerting competitive pressures on merchant service fees and interchange fees. On balance, the study concludes that 'no surcharge' rules are not desirable. Merchants should not be prevented by the credit card schemes from passing on some or all of the merchant service fee through surcharges, even if some merchants do not avail of the flexibility for their own commercial reasons.[114]

While the Reserve Bank's removal of "no surcharge" rules following this study may have given rise to excessive merchant surcharges in some cases, there remains a widespread acknowledgment that allowing the freedom to pass on costs through customer surcharges that accurately reflect merchant costs is more efficient than a ban on surcharging. This was acknowledged by the recent Financial System Inquiry, which noted:

> The Inquiry agrees with the RBA that surcharging can improve the efficiency of the payments system by providing accurate price signals to customers. In addition, some consumer groups, such as Choice, acknowledge that accurate surcharging can provide positive outcomes.[115]

Professor Stephen King has usefully summarised the issue as follows:

> If the retailer cannot surcharge (i.e. it has to set the same price regardless of how a customer pays) then it will recover the cost of payments through the price. Put another way, the retailer's price will include a margin to cover the 'average' payment cost. This means that if you use a high cost payment instrument, like a credit card, you pay the same as someone who uses a low cost payment instrument, like a debit card. So without surcharging, credit card customers are effectively being 'cross subsidised' by customers who don't use credit cards. The

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112 John Stewart, "Issuers' Apple Pay Pact Assigns Remarkable Authority to Card Networks As Well As Apple", *Digital Transactions*, 27 October 2014.

113 Credit card schemes historically included "no surcharge" rules preventing merchants from adding surcharges for customers paying with the scheme's cards. These rules have been restricted or prohibited in many jurisdictions.

114 RBA and ACCC *Debit and Credit Card Schemes in Australia: a Study of Interchange Fees and Access*, October 2000 at pp 53-55.

115 Financial System Inquiry, Final Report, at p 175.

> non-credit card-customers save the retailer money, but the customers do not get any benefit from this…
>
> Under a no-surcharge rule, there will be excessive use of credit cards. Customers will choose to use a credit card even when the total cost of using that card (including the cost to the retailer) exceeds the benefit to the customer. This is because the customer doesn't face the true cost of using the credit card. The no-surcharge rule ensures the cost is 'shared' with other customers who do not pay by credit card.
>
> Surcharging changes this. Instead of spreading the credit card cost among all customers, a surcharge means that the customer who uses the credit card (and creates the cost for the retailer) also pays the extra cost. Because credit cards are relatively expensive payment instruments, forcing consumers to face the true cost of credit cards will discourage them from using these cards. Consumers will substitute to less costly payment instruments like direct debit.[116]

The same policy considerations would apply to any restriction on the capacity for financial institutions to pass on the actual costs of using a Third Party Wallet to the users of that wallet. While individual financial institutions may well decide not to pass on any or all of these costs, restricting their capacity to do so would result in distortions and inefficiencies.

Collective negotiation with a view to ensuring that institutions have the ability to pass on the costs of Third Party Wallets if they choose to do so, will promote transparency and efficiency in the payment system and reflect long-standing Australian regulatory policy.

6.4 Public benefits arising from collective bargaining

The ACCC has noted that:

> In some circumstances, allowing collective arrangements may be in the public interest. For example smaller businesses can face challenges when negotiating with larger businesses and the outcomes from these negotiations may not be the most efficient or optimal. By getting together, small businesses may have a better opportunity to have input into negotiations than if they stay on their own.
>
> The Act therefore allows protection from legal action to be granted to parties to engage in anti-competitive conduct, including collective bargaining, when there are public benefits that would outweigh the detriments to competition.[117]

Although the ACCC's guide to collective bargaining notifications is directed at the notification process that is limited to small businesses, its advice on the public benefits that may arise from collective bargaining is instructive for large businesses negotiating with even larger businesses.

In this context, it is worth noting that Apple is now the world's largest publicly traded company by market capitalisation, with a market value of $US533 billion at 2 February 2016.[118] Its 2014 revenues were $US182 billion and its 2015 revenues reached $US234

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116 Stephen King, "Credit card surcharging: what is it and how is it changing?" *The Conversation*, 21 October 2015.

117 "Collective bargaining and boycotts", ACCC website at www.accc.gov.au/business/anti-competitive-behaviour/collective-bargaining-boycotts, accessed 28 September 2015.

118 *Financial Times* Global 500 2015.

billion worldwide.[119] It has been considered the world's most valuable brand since 2012 with an estimated brand value of $US143 billion.[120]

Google's parent company Alphabet's market value at 2 February 2016 was $US519 billion, and it has frequently been the second largest publicly trading company, and briefly the largest, by market capitalisation. Google's 2014 worldwide revenue was $US66 billion and in 2015 it was judged the world's third most valuable brand.[121]

Samsung's market value at 2 February 2015 was $US154 billion and its worldwide revenues eclipsed Apple's at $US188 billion.[122] In 2015 it is considered the world's second most valuable brand after Apple.[123]

By contrast, the combined market capitalisation of the listed applicants was $A313 billion as at 2 February 2016.[124] Their combined revenues for the 2015 financial year were $A77 billion.[125] Although CBA, Westpac and NAB are considered Domestic Systemically Important Banks (**D-SIBs**) (and along with ANZ are the only Australian D-SIBs), none of them are considered Globally Systemically Important Banks (**G-SIBs**) like Barclays, RBS, HSBC, Bank of America, Citigroup and Wells Fargo – the banks that Third Party Wallet Providers are used to dealing with.

That is, Apple has more than twice the market capitalisation and annual revenue than the applicants combined. Google's market capitalisation and annual revenues are comparable to the applicants combined, and Samsung's market value approaches the applicants combined and has more than double their revenues.

In its guide to collective bargaining notifications, the ACCC notes that public benefits may arise from collective bargaining in the following circumstances:

(a) Increased input into contracts

The ACCC notes that:

> Competition between buyers and sellers on terms and conditions of supply or acquisition, through the process of negotiation, is likely to lead to an efficient outcome. If buyers or sellers are constrained in their ability to provide input into those terms and conditions, the most efficient outcome may not be achieved.
>
> Collective bargaining may help businesses by providing a mechanism through which they can provide greater input into contracts and be more commercially efficient.[126]

As noted above, the issuers that have signed up to Apple Pay appear to have had little or no input into the terms of the arrangements, with contracts reportedly presented on a "take it or leave it" basis.[127]

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119 "Apple reports record fourth quarter results", Apple press release, 27 October 2015.

120 *Forbes,* "The world's most valuable brands", 2015.

121 *Forbes,* "The world's most valuable brands", 2015.

122 Samsung 2014 Annual Report

123 *Forbes,* "The world's most valuable brands", 2015.

124 Yahoo Finance

125 Annual Reports

126 at page 33.

While it has been speculated that Apple may have accepted lower payments from issuers in the United Kingdom than in the United States in recognition of regulated – and much lower – interchange fees, there has been no indication that Apple has shown any willingness to negotiate the extent to which it will allow competition with Apple Pay on its platforms.[128]

(b) Improvements in information

The ACCC also notes that:

> Collective bargaining arrangements are often proposed as a way to address instances of information asymmetry. In this context, information asymmetry occurs when one party to an exchange has access to information that is not available to the other party and when that information would improve the commercial decisions of the uninformed party.
>
> When a collective bargaining arrangement reduces information asymmetry it is likely to improve efficiency, for example by facilitating informed decision making, and constitute a public benefit.[129]

Again, as noted above, in other markets Third Party Wallet Providers are reported to have negotiated with issuers from the beginning under conditions of secrecy, withholding information about which if any other issuers they had approached, and preventing issuers from disclosing any information about ongoing or completed negotiations using non-disclosure agreements.[130]

This strategy is likely to have resulted in issuers accepting Third Party Wallet Providers' terms for fear that they will be disadvantaged against competitors who may have accepted sooner and may be ready to participate in a Third Party Wallet from the local launch date. For example, it is likely to be particularly difficult for issuers to negotiate Apple's exclusivity requirements when they have no idea whether other issuers have had any measure of success in doing so.

(c) Facilitation of market dynamics

The ACCC further notes that:

> When a collective bargaining arrangement increases the ability of the collective bargaining group to supply new areas or increase competition in their existing market, the ACCC is likely to accept that this results in a public benefit.[131]

As discussed above, the collective bargaining arrangement proposed by the applicants is directed entirely towards the ability of the collective bargaining group – and others – to supply new areas or increase competition in their existing market. That is, the proposed arrangements are intended to increase the ability of the applicants and others to supply mobile wallet services to all potential customers – no matter what mobile platform they use – and to increase competition with Third Party Wallets.

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127 "Apple set to muscle in on banks $9 billion card game", *Sydney Morning Herald*, 22 September 2014.

128 "UK banks put squeeze on Apple Pay fees", *Financial Times,* 14 July 2015.

129 at page 34.

130 "Banks did it Apple's way in payments by mobile", *New York Times*, 11 September 2014.

131 at page 35.

(d) Transaction cost savings

Finally, the ACCC notes that:

> Transaction costs may be lower in implementing a collective bargaining agreement for a single negotiating process, or a small number of negotiating processes, than when the target must negotiate and implement agreements with every business with which it deals. The ACCC considers that all efficiency savings, such as transaction costs will constitute a public benefit. However, the ACCC may place greater weight on transaction cost savings as public benefits, where they accrue broadly or are of value to the community generally.[132]

Since the proposed collective bargaining arrangements are limited to the questions of competition, standards and transparency, each issuer will need to negotiate the remainder of its agreement with Third Party Wallet Providers. As a result, the reduction in transaction costs will be limited to the savings that may arise from negotiating these issues on a collective rather than individual basis.

However, these savings are likely to be significant, as any negotiations concerning these issues are likely to be protracted and difficult. Further, these savings are likely to be valuable to the community generally, as they will result in increased competition and consumer choice in mobile wallet services far sooner than would be possible under individual negotiation.

7 Public detriments

7.1 Detriments for Third-Party Wallet Providers

If authorisation is granted, Third-Party Wallets may be introduced in Australia on a non-exclusive basis (or only on a partially exclusive basis).

In this case Third-Party Wallet Providers may incur some financial costs in developing and documenting a public API for access to the NFC hardware if it has not done so already; and may also forego some revenues due to increased competition. However, it will remain for Third-Party Wallets Provider to negotiate commercial terms with each applicant on an individual basis, and these negotiated terms may reflect its loss of exclusivity.

If collective negotiations fail, it is possible that certain Third-Party Wallets may not be introduced in Australia. That is, Third-Party Wallet Providers may consider that exclusivity is critical to protect their investment and their worldwide business model, and that there are no commercial terms that would compensate for their loss of exclusivity. More probably, those Third Party Wallets may only be introduced on a limited basis – such as through the global Apple Pay arrangement with American Express, which includes Australia, and with other card Issuers that agree to the exclusive terms.

This will be a commercial decision for Third-Party Wallet Providers; however, they may incur a potential loss of profits that they could have obtained if they had negotiated individually with each applicant and maintained exclusivity.

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[132] at page 34.

7.2 No detriments to competition arising from collective bargaining

In its guide to the notification of collective bargaining, the ACCC notes that the anti-competitive effects of that bargaining may be limited where:

(a) the current level of individual bargaining between members of the group and the target is low, such that the difference between the level of competition with or without collective arrangements may also be low

If Third Party Wallet Providers were to conduct its negotiations in Australia in the manner that, for example, Apple has reportedly negotiated the introduction of Apple Pay in the United States, then the level of individual bargaining between the applicants and such Third-Party Wallet Providers would be considered low to non-existent. If terms are offered on a "take it or leave it" basis and Issuer feedback is not taken into account, it is difficult to see that Issuers compete with each other in any sense to acquire Third-Party Wallet services from Third-Party Wallet Providers. In these circumstances, the difference between the level of competition with or without collective arrangements would also be low.

(b) the agreement does not restrict the ability of parties to compete in other ways, for example, on quantity or service

The collective negotiation is limited and in no way restricts the ability of the applicants to compete in other ways. All other commercial aspects of the arrangements with Third-Party Wallet Providers are left to individual negotiation and may vary considerably on price, service levels or other details.

(c) there is voluntary participation in the arrangements

Participation in the arrangements is voluntary for all parties concerned.

(d) there are restrictions on the coverage, composition and representation of the bargaining group

The bargaining group in relation to each collective negotiation will depend on the number of issuers who elect to participate in such a negotiation. Any Third-Party Wallet Provider will remain free to negotiate individually with any issuers that have decided not to be part of the bargaining group.

(e) there is no boycott involved

The applicants propose only a limited boycott to the effect that no applicant will enter into individual negotiations with a Third Party Wallet Provider while a collective negotiation with that particular Third Party Wallet provider on the limited issues identified is ongoing.

The ACCC has identified the public benefits that can arise when a collective negotiation process is supported by a limited collective boycott:

> The ACCC considers that in some circumstances, collective bargaining may be insufficient to address market failures and a collective boycott (or the credible threat of a boycott) may result in benefits by facilitating negotiation of more efficient contracts…
>
> [P]roviding [negotiating group] members with the ability to agree not to deal with a supplier individually while negotiations are on foot is likely to facilitate additional efficiency gains than those that may be achieved from collective bargaining alone.

> This is because the potential is reduced for resources to be spent on ongoing collective negotiations in circumstances where it would be inefficient to do so because a supplier intends to reach individual arrangements with some members of the collective rather than a collective outcome.[133]

The applicants consider that collective bargaining without some form of collective boycott is only likely to be effective in very limited circumstances, and question whether it is possible to secure the benefits of collective bargaining without the "detriments" of a collective boycott. Individual negotiation in circumstances where one party knows that the other cannot walk away from the negotiation is unlikely to be successful, and in most circumstances the same will apply to collective negotiation. As Trindade, Smith and Merrett have pointed out:

> The debate about collective negotiation versus collective bargaining in the Chicken Meat Growers authorisation brought this starkly into focus by suggesting that collective bargaining alone can result in public benefit without any need for a collective boycott. But, in reality, being allowed to ask for the same price and terms without being able to say no at any given point is not negotiating. Indeed, any collective bound by such a restriction is in a position not dissimilar to a vendor undertaking a fire sale.[134]

Similarly, the Dawson Committee viewed collective boycotts as integral to a collective bargaining arrangement:

> A distinction has been drawn between collective bargaining and behaviour amounting to a primary boycott, or exclusionary conduct. The ACCC apparently takes the view that primary boycotts can significantly increase the anti-competitive effect of collective bargaining arrangements. The Committee is unclear whether the ACCC would view a collective bargaining agreement between buyers to refuse to buy from a supplier in the absence of a satisfactorily negotiated price as a primary boycott, but it would seem to the Committee to be an integral part of such an agreement.[135]

In the present circumstances, Third Party Wallet Providers have every incentive to reach individual arrangements with some members of a collective negotiation group rather than a collective outcome. [c-i-c]

In relation to collective boycott arrangements generally, the ACCC notes that:

> Collective boycotts are more likely to be appropriate when there is significant disparity in bargaining power between the collective bargaining group and the target, that is, the bargaining power of the target means it is less willing to participate in collective bargaining arrangements. The case for a collective boycott would be contingent on it being clear that a failure to collectively negotiate would result in inefficiencies.[136]

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133 at [104]–[108].

134 Rachel Trindade, Rhonda Smith and Alexandra Merrett, "The Australian difference: has the public benefit test been eroded?" *The State of Competition,* Issue 12 (May 2013).

135 *Review of the Competition Provisions of the Trade Practices Act*, January 2003, at p 118.

136 at page 37.

As set out above, there is significant disparity in bargaining power between the collective bargaining group and any Third-Party Wallet Provider. In particular, Apple is more than twice the size of the combined bargaining group by market capitalisation and by global revenues, and Samsung and Google are almost as large. Third Party Wallet Providers' bargaining power may well mean that they are unwilling to participate in collective bargaining arrangements.

As also set out above, a failure to collectively negotiate would be likely to result in some Third Party Wallets being introduced in Australia on an exclusive or limited basis, in any case leading to a lack of competition, innovation and consumer choice in mobile payment and mobile wallet services in Australia and almost certainly resulting in inefficiencies.

7.3 No anti-competitive information exchange

As discussed above, the scope of the proposed collective negotiation is limited to the questions of competition, standards and preventing restrictions on the pass-through of charges, and all other commercial terms and conditions will be subject to individual negotiation between Third-Party Wallet Providers and each bank or payment provider.

The collective negotiation will not facilitate or permit any information exchange beyond the basic information relevant to the conduct to be authorised and necessary to the limited collective negotiation.

7.4 No substantial lessening of competition

Finally, the proposed collective negotiation does not have the purpose, and is not likely to have the effect, of substantially lessening competition in any market.

In relation to the market for the supply of mobile wallets and mobile payments to consumers:

- the only purpose of the proposed collective negotiation is to increase competition in that market by allowing consumers to choose between mobile wallet and mobile payment options regardless of their preferred mobile platform; promoting best practice standards that give consumers greater confidence in mobile wallets; and ensuring that any fees charged are efficient and transparent; and
- the likely effect of the proposed collective negotiation will vary depending on whether collective negotiations are successful in achieving their purpose. If they are successful, then their effect will also be to increase competition. If they are not, they are unlikely to substantially lessen competition since:
  - all issuers will continue competing in the market supplying their individual mobile wallets;
  - all three Third Party Wallets are now available in Australia and will continue to be available to the customers of an increasing number of issuers; and
  - any delay in particular issuers participating in particular Third Party Wallets will be limited in time and will not have an enduring effect on competition.

In relation to any markets for the acquisition of mobile wallet and mobile payment services by issuers from Third Party Wallet Providers, or the supply of mobile wallet and mobile payment services by issuers to Third Party Wallet Providers:

- the scope of the proposed collective negotiation is limited to three discrete issues and will not affect competition on the other commercial terms including price;

- the scope of the proposed collective negotiation is also limited in time and will not have an enduring effect on competition;

- if the proposed collective negotiation is successful, they will increase competition in these markets by lowering barriers to entry for Third Party Wallet Providers and increasing the potential of Third Party Wallets for issuers across all mobile platforms.

Glossary

Acquirer	An acquirer is a financial institution that receives payments on behalf of a merchant and may also provide a range of merchant services including point of sale (**POS**) equipment.
API	An application programming interface (**API**) is a set of frameworks and tools for building software applications on a particular platform such as a mobile operating system. Developers can easily access and incorporate software and hardware features that are exposed to them by a public and documented API.
App	An app is a software application typically used on a mobile device.
EMV	EMV stands for Europay, MasterCard and Visa and refers to a technical standard developed by those credit card schemes to govern smart payment cards and compatible payment terminals and automated teller machines. EMV systems are differentiated from older systems by using integrated circuits, or chips, in preference to the older magnetic stripes, and benefit from greater security and additional functionality.
eSE	An embedded Secure Element (**eSE**) is a Secure Element embedded in a device. Recent Apple and Samsung handsets have eSEs.
HCE	Host card emulation (**HCE**) is the emulation of a contactless card such as a credit, debit or transit card using software and cloud storage to replicate the security features of a hardware Secure Element. HCE is built into Android 4.4 and later, Windows Phone 10 and other operating systems.
Issuer	An issuer is a financial institution that issues a credit or debit card to a cardholder.
MST	Magnetic Secure Transmission (**MST**) is a technology developed by LoopPay and acquired by Samsung that creates a magnetic field that emulates the swipe of a traditional magnetic-stripe payment card and can therefore be used with traditional card readers.
NFC	Near-field communication (**NFC**) is a group of standards and protocols for radio communications over a short distance, typically 4cm or less. Contactless cards and certain mobile devices can transmit payment information via NFC to compatible POS terminals.
POS	The point of sale (**POS**) is the point at which a merchant sells a product or service to a customer. POS equipment, or a POS terminal or device, is the means by which a merchant processes a payment and includes the capacity to read an EMV chip, a magnetic stripe, a contactless card or a QR code, depending on the features of the POS terminal.
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 compatible POS terminal.
Scheme	A scheme is a payment network in which financial institutions can participate in order to facilitate card payments between cardholders and merchants. Visa and MasterCard are both **four-party schemes** involving: • the cardholder; • the issuer, that is, the financial institution who issued the card to the cardholder; • the acquirer, that is, the financial institution who acquires payments on behalf of a merchant; and • the merchant. American Express and Diner's Club are both **three-party schemes** in which the issuer and the acquirer are the same financial institution.
SE	A Secure Element (**SE**) is a tamper-resistant chip that securely hosts small applications and their data, such as tokenised card details. It may be embedded in a device or hosted on a mobile phone SIM or memory card.
SIM	A subscriber identification module (**SIM**) or SIM card is a common name for the removable miniature smartcard used to authenticate customers on a mobile network. Technically the card is a Universal Integrated Circuit Card (**UICC**) and the SIM is an application running on the UICC, along with other applications such as a Secure Element application.
SMS	Short Message Service (**SMS**) is the text messaging service available on mobile phone networks.

Attachment A – Mobile payments overseas

1 United States

Adoption of chip-enabled credit cards and contactless NFC payments has been relatively slow in the United States. For example, in 2013 chip-based cards were only used in around 0.07% of in-store card transactions.[137] By 2015 only 14% of Americans owned a contactless card, up from 10% in 2014,[138] and only 9% had made a contactless purchase.[139] Smartphone penetration in the United States is estimated at 58%.[140]

From October 2015, the US payment networks are shifting liability for fraud in face-to-face card transactions from the issuer to the acquirer or merchant in some circumstances if they do not use chip-enabled devices to process payment transactions.

This measure is expected to accelerate the adoption of chip-enabled merchant terminals. However, as late as July 2015 only 31% of business owners surveyed reported that they could accept a chip card.[141]

While contactless NFC payments are not inherently connected with chip-based cards and terminals, in practice most modern point-of-sale terminal that can accept chip-based card transactions will also include contactless NFC functionality.

(a) Isis/Softcard

Isis was founded by AT&T, Verizon and T-Mobile with credit card networks Visa, MasterCard, Discover and American Express and launch issuers Chase, Capital One and Barclaycard and the prepaid Isis Cash Card.

It trialled from 22 October 2012 with support for Android phones with an NFC chip using a carrier SIM for the Secure Element: the HTC Droid Incredible 4G, Motorola Droid RAZR HD and RAZR Maxx HD, and the Samsung Galaxy S III.

In December 2012, Verizon announced that it would not offer Google Wallet for its Galaxy Nexus because it needed access to the Secure Element embedded in the carrier SIM card. However, Verizon's Isis Mobile Wallet app also requires Secure Element access.

In July 2013, Isis announced it would launch nationally by the end of the year with support for 35 devices. Card issuer Capital One withdrew from the venture in September 2013, and when it finally launched nationwide in November 2013 it only offered credit cards from MasterCard and Chase.

Isis was renamed Softcard in September 2014. In November 2014 Softcard became available on compatible Windows Phone 8.1 handsets.

In February 2015 Google announced that it would acquire certain assets and intellectual property from Softcard and integrate it into Google Wallet.

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137 Federal Reserve Payments Study, 2013.

138 "Australia leads the way for contactless ownership and usage", *NFC World*, 13 May 2015.

139 RFi, *Global Payments Evolution 2015*.

140 Deloitte Mobile Consumer Survey.

141 "Wells Fargo survey: Many small businesses not ready for EMV chip cards", 6 August 2015.

(b) Google Wallet

Google Wallet was a mobile payment system offered in the US that allowed users to store credit and debit cards, loyalty cards and gift cards on their Android phones. It launched on 19 September 2011 with support for Citi MasterCard and a Google Prepaid Card on the Nexus S 4G from Sprint. It required NFC capability for contactless payments, stored credentials in a Secure Element and used PIN authentication.

Google Wallet expanded to Sprint's LTE Galaxy Nexus in January 2012, to AT&T's Galaxy Nexus and Galaxy Nexus S in February 2012, to Virgin Mobile's LG Optimus Elite in May 2012, the Sprint HTC Evo 4G LTE in July 2012, the Google Nexus 7 in July 2012, the Galaxy S4 in June 2013.

In August 2012, Google re-released its Wallet to allow customers to make use of a "virtual" Google Wallet MasterCard that would then charge a credit card of their choice on file with Google. It added the Discover card network in August 2012 and the MetroPCS carrier in October 2012.

In May 2013, Google Wallet expanded to allow money to be sent as a Gmail attachment between Google Wallet users, free if from a bank account or 2.9% per transaction (minimum $US0.30) using a credit or debit card.

In September 2013, Google Wallet was updated to expand direct transfers, add loyalty cards and extend this new functionality to all major carriers and all Android devices and the iPhone – though contactless payments remained limited.

In November 2013, Google Wallet launched a physical debit card allowing users to make payments with their Google Wallet balance at ATMs, banks and businesses that accepted MasterCard Debit.

In February 2015 Google announced that it would acquire certain assets and intellectual property from Softcard and integrate it into Google Wallet, which would be installed on future Android smartphones from AT&T, Verizon and T-Mobile. In fact Google Wallet was then limited to direct payments between friends and family; and contactless payments, loyalty programs and gift cards were moved to Android Pay.

(c) Android Pay

Android Pay launched on 10 September 2015 in the US, on 18 May 2016 in the UK and on 14 July 2016 in Australia. It requires an NFC-capable smartphone running Android 4.4 KitKat or above and works with Visa, MasterCard, American Express and Discover Cards issued in the US by Bank of America, Citibank, US Bank, Capital One, Navy Federal Credit Union, PNC, Regions, USAA and Wells Fargo, and in the UK by Bank of Scotland, First Direct, Halifax, HSBC, Lloyds Bank, M&S Bank, MBNA and Nationwide. In Australia it supports cards issued by ANZ, American Express, Macquarie and a number of regional banks and credit unions.

Android Pay uses tokenisation to create a virtual credit card number and keep actual card data hidden from merchants. It now comes preloaded on smartphones from Verizon, AT&T and T-Mobile and can be installed on smartphones from Sprint. By launch more than 1 million locations across the US accepted contactless payments.

It has been reported that Google is not charging transaction fees to card issuers for participating in Android Pay as a result of its participation in the Visa Digital Enablement Program (**VDEP**) and the MasterCard's Digital Enablement Express, which provide tokenisation and digitisation

services free of charge and will not pass through any fees between technology partners and financial institutions.[142]

(d) Samsung Pay

Samsung Pay launched in South Korea on 20 August 2015, in the United States on 28 September 2015. in China on 29 March 2016, Spain on 2 June 2016, in Australia on 15 June 2016 and in Singapore on 16 June 2016. It requires a recent Samsung phone or the Samsung Gear S2 smartwatch, which can be paired with a range of Android handsets.

In South Korea, total registrations reportedly reached 500,000 users in the month since launch, representing more than $US30 million over 1.5 million total transactions.[143]

In the US, Samsung Pay requires a card from Bank of America, Citibank or US Bank. It runs on the AT&T, T-Mobile, Sprint and US Cellular wireless networks, but is not yet preloaded on Verizon handsets.

Samsung Pay uses either fingerprint or PIN authentication. It uses tokenisation to ensure that credit card information is not stored on the device or sent to the merchant terminal.

As well as NFC capability, following Samsung's acquisition of LoopPay in February 2015, its most recent handsets also support Magnetic Secure Transmission (**MST**), which generates magnetic fields to emulate swiping a card through a reader. As a result, Samsung Pay can be used at any terminal that reads magnetic stripe credit cards.

Samsung intends to roll out Samsung Pay to the UK

Like Android Pay, Samsung Pay uses Visa and MasterCard's digital enablement services which do not pass through any costs between technology partners and financial institutions.

(e) MCX, CurrentC and Chase Pay

Merchant Customer Exchange (**MCX**) is a mobile commerce network developed by major US retail chains such as Best Buy, Walmart, Target and 7-Eleven. Its core product is CurrentC, a mobile wallet app for iOS and Android devices that allows for payments linked to a bank account, store and gift cards, coupons and loyalty programs. Instead of NFC payments, it uses QR codes and may also use Bluetooth Low Energy and other technologies in the future.

CurrentC is still being trialled in limited areas, and a number of merchants associated with MCX were reported to have turned off the NFC capability of their POS terminals in order to discourage use of Apple Pay and its NFC-based competitors.

In October 25, JP Morgan Chase announced that it was partnering with MCX to introduce Chase Pay, a mobile wallet compatible with the CurrentC system. Chase was one of the first banks to offer Apple Pay and will continue to do so.

(f) Banking apps

In October 2015, Capital One announced a new mobile wallet app for iPhones designed to complement Apple Pay by providing detailed transaction information, account balances and

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142 "Google Misses Out on Apple's Slice of Mobile Transactions", *Wall Street Journal*, 5 June 2015.

143 "500,000 subscribers to Samsung Pay creates anticipation for US debut", *Business Korea,*17 September 2015 at http://www.businesskorea.co.kr/ict/news/12110-samsung-storm-500000-subscribers-samsung-pay-creates-anticipation-us-debut

rewards information. It also added NFC functionality to its Android app using HCE, though it also intends to participate in Android Pay on that platform.[144]

2 United Kingdom

In July 2015, Visa reported that the UK had issued 49.6 million contactless cards and installed 410,000 contactless terminals.[145] Contactless card ownership is estimated at around 46% and 23% of the population have made a contactless purchase.[146] Smartphone penetration is estimated at 70%.[147]

(a) O2 Wallet

The O2 Wallet app was launched in April 2012 to allow iPhone, Android and BlackBerry users send and receive money via text message. Users could also add money using a debit card or by using cash at a number of outlets. They could spend money with a virtual Visa card for online purchases and a physical Visa card for in-store purchases including contactless payments. Phone-based NFC functionality was planned but had not been implemented when the service closed in March 2014.

(b) EE Cash on Tap

In July 2013, mobile network operator EE, in partnership with MasterCard, launched its Cash on Tap app for selected Android handsets such as the Samsung Galaxy S4, Samsung Galaxy S3 LTE and Sony Experia SP. It now supports 19 smartphones from Samsung, Sony and HTC using a SIM-based Secure Element. Users must manually or automatically load their Cash on Tap account from their bank accounts. They can also use Cash on Tap on contactless Transport for London journeys.

(c) Vodafone Wallet

Vodafone announced its Wallet app in November 2013 and launched it in September 2014. It was initially based on a Vodafone SmartPass, a prepaid account delivered in partnership with Visa to which users had to transfer money from their other accounts, and also included store and loyalty cards. In early 2015 it allowed users to add their own Visa cards, tokenised and stored on a SIM-based Secure Element.

(d) Barclays Quick Tap, PayTag, Pingit and bPay

Quick Tap was the first commercially available NFC payment program in the UK and was launched with the Orange mobile network in 2011 using a SIM-based Secure Element and a number of NFC-enabled handsets such as the Samsung Tocco. It used a MasterCard-branded prepaid payment app that let Barclaycard, Barclays debit or Orange Credit Card users transfer funds of up to £100 into the app. In 2012 the service was expanded to allow loading from any debit or credit card. The service was closed in October 2014.

Pingit is a direct mobile payment system introduced by Barclays in February 2012 and available for iOS, Android, BlackBerry OS and Windows Phone platforms. It allows instant money transfers to be made between current accounts in UK banks. The Pingit app includes features such as a bill splitting calculator.

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144 Android Pay website, <http://android.com/pay> accessed 12 November 2015.

145 Visa Europe, "1 billion Visa contactless purchases made in last year", 6 July 2015.

146 RFi, *Global Payments Evolution 2015.*

147 Deloitte Mobile Consumer Survey.

In 2012 Barclaycard made the PayTag, an NFC sticker that acted as a contactless extension of the customer's Barclaycard Visa card account. More than one million PayTags were issued.

Barclays bPay originally provided customers with an NFC-enabled wristband available between June 2014 and March 2015. Barclays second-generation bPay, launched in July 2015, provides customers with an NFC-enabled wristband, fob or sticker to enable contactless payments. Each device is associated with a wallet that can be topped up using any MasterCard or Visa debit or credit card. Payments can be completed using only the device, and the device can be managed using an Android or iOS app or a web browser. bPay is accepted for transactions up to £30 at any contactless payment terminal including across the Transport for London network.

Barclaycard's Android mobile banking app has also been given NFC functionality via HCE.[148]

(e) Zapp

Zapp was announced in January 2014 as a mobile payments startup formed by payments infrastructure operator VocaLink. Major banks HSBC, First Direct, Nationwide, Santander and Metro Bank signed up with a view to providing their customers with the ability to make NFC and QR code payments online and in-store by integrating with the banks' existing mobile apps. Barclays joined in July 2015 bringing support for its Pingit service.

(f) Paym

Paym is a mobile payment system launched in April 2014 across banks and building societies in the UK. Participants in the system must link their mobile phone number with a bank account and can then transfer money through their existing online or mobile banking service.

3 Canada

Canada is one of the top countries in the world for NFC penetration. By the end of 2014, over 70% of credit cards and 40% of debit cards in Canada supported contactless payment, with 30% of all point-of-sale devices and 80% of merchant devices in targeted categories are NFC-enabled. Contactless transactions represent between 10% and 20% of total transactions.[149]

Mobile payments in Canada have historically focused on SIM-based mobile payment solutions, which embed a Secure Element (**SE**) in a carrier SIM card, and card issuers accordingly negotiate with one or more mobile network operators to provide these services to end users. The Canadian White Paper considers that this SIM-based solution is limiting the adoption of mobile payments in Canada, due in part to the need for issuing banks to negotiate with each mobile network operator to implement their mobile wallets or payment products. It estimates that fewer than 25% of consumers have all of the required elements to participate in mobile payments – including a compatible handset, a participating bank and an arrangement between that bank and the customer's carrier.[150]

A number of banks have released proprietary mobile wallets that may integrate with their mobile banking apps: CIBC, TD, Scotiabank, Desjardins and RBC.

In November 2014 two banks – PC Financial and TD – jointly launched Ugo, an open wallet system that can hold cards from both institutions as well as loyalty and gift cards. By August 2015 Ugo was halfway to its forecast of 100,000 unique users and 250,000 cards by the end of

148 "Barclays' Apple Pay and Android Pay rival has finally been revealed", *Techradar*, 14 January 2016.

149 *Payments Security White Paper* at p 3–4.

150 at p 7.

2015.[151] While the wallet is available the iPhone, contactless payments require a compatible Android or BlackBerry device.

A second open mobile wallet, Suretap, launched in June 2015 and reported 180,000 users in September 2015. It is a SIM-based solution available on approximately 30 NFC-enabled Android and BlackBerry handsets. So far card issuers CIBC and Rogers Bank are participating, along with a number of retailers using QR codes and barcodes to provide their own payment and loyalty programs.[152]

The Canadian White Paper acknowledges the development of mobile payment services that use HCE and credentials stored in the cloud instead of a physical Secure Element embedded or inserted in the handset. It notes that proprietary HCE wallets have been launched in Australia, New Zealand, France and Spain and are being piloted in other countries including Canada.[153]

It considers that HCE technology could help accelerate adoption of contactless mobile payments but that issues of security and interoperability will need to be addressed as the technology evolves.[154] In particular, it considers it critical that open mobile wallets launching in Canada deliver EMV-equivalent security – that is, security equivalent to the standards for physical chip systems developed by the major card networks.[155] It also considers it critical that open wallets refer every request to add a payment credential to the issuer for validation in order to avoid an increase in fraud.[156]

In September 2015, RBC became the first bank in North America to add HCE payments to its mobile wallet and banking app and allow NFC payments without either a SIM-based or embedded Secure Element.[157] After six weeks of operation it reported that it had tripled its mobile wallet user base from the SIM-based NFC solution it had offered for 18 months.[158]

Apple Pay launched in Canada on 17 November 2015 with American Express as the only participating issuer. A wider launch followed on 10 May 2016 with all major banks.[159]

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151 "New mobile wallet apps prepare for Apple Pay's Canadian launch", *The Globe and Mail*, 4 August 2015.

152 "Suretap, Canada's Leading Open Digital Wallet, Expands Payment Options with Introduction of Virtual Reloadable Prepaid Card", Suretap press release, 8 September 2015.

153 at p 17.

154 at p 19–20.

155 at p 20.

156 at p 24.

157 "RBC brings HCE mobile payments to North America", *NFC World*, 14 September 2015.

158 "RBC reports strong uptake for HCE wallet, adds support for digital receipts, loyalty and gift cards", *NFC World*, 31 October 2015.

159 "Canadian banks, including 'the Big Five', sign on for major Apple Pay expansion", *Financial Post*, 10 May 2016.

Attachment B – Apple's significance in technology sectors

1 Apple's impact on emerging and established markets

Apple has supplied computer hardware, software and peripherals since its inception in 1976, with a number of successful and iconic product lines such as the Apple II, the Macintosh, the PowerBook and the iMac.

In early 2001 it launched iTunes, a software product that managed and played digital music, and converted between compact discs and digital music formats, initially exclusive to Mac computers. In late 2001 it launched the iPod, a portable digital audio player that was initially compatible only with Mac computers running the iTunes software. In 2004 a second-generation iPod was released, this time also compatible with Windows through third-party software; and in 2003 Apple released iTunes for Windows computers.

The iPod was not the first digital music player, and on launch it was significantly more expensive than competitors with similar specifications. But it was seamlessly integrated with the iTunes software, its design was superior and its battery life was better than other hard-drive based music players. By 2007 Apple had sold more than 100 million iPods, and iPod sales accounted for up to 48% of quarterly revenues. Its share of the personal music player market quickly rose above 70% and remains there, though the overall size of the market has declined considerably.

In 2003 Apple launched the iTunes Music Store, which was exclusively accessed via the iTunes software on the Mac and PC and integrated tightly with the iPod. Apple effectively created and continues to dominate the legal music download market, with shares as high as 88% in 2006 and 64% in 2012. It has been the world's top music retailer since 2010 and has sold more than 25 billion songs. In 2005 it added movie and TV downloads and still holds around 65% of the digital video download market.

In 2007 Apple launched the first iPhone, described as a combination widescreen touch-controlled iPod, mobile phone and Internet communicator. Again, it was not the first device to offer this combination of features, many of its specifications were lower than its immediate competitors, and it was exclusive to a single carrier; but it was simple and intuitive to use, it was well integrated with iTunes and it was able to leverage a large installed base of iPod users.

After its first full quarter of sales it had 27% of the US smartphone market, closely behind the market leader BlackBerry. Apple now sells over 200 million iPhones each year and iPhone sales make up more than 60% of Apple's revenue. Although it now accounts for less than 20% of worldwide smartphone sales, in 2015 it was able to command 92% of global smartphone profits due to its focus on higher-margin devices.[160]

While the original iPhone was closed to third-party application developers, with the second-generation iPhone in 2008 Apple allowed developers to create and sell iPhone apps through Apple's App Store, an extension of the iTunes Store. There are now more than 1.5 million iOS apps available on the App Store, and users have completed more than 100 billion app downloads. While more apps are now available on the Google Play store, the Apple App Store accounts for around 70% more revenue than Google Play.[161]

Apple continues to leverage its successes into greater successes in additional markets. As subscription-based music and video streaming services have begun to erode downloads, in

160 "Apple's Share of Smartphone Industry's Profits Soars to 92%", *Wall Street Journal*, 12 July 2015.

161 "Revenue Gap Between iOS And Android Apps Grows, Thanks To China", *Techcrunch*, 14 April 2015.

2015 Apple launched Apple Music and it is rumoured to be launching a video streaming service in 2016.[162] It is now rumoured to be developing an electric car:

> Apple's commitment is a sign that the company sees an opportunity to become a player in the automotive industry by applying expertise that it has honed in developing iPhones—in areas such as batteries, sensors and hardware-software integration—to the next generation of cars.[163]

Given this history, Apple appears to hold considerable advantages in any new market that it chooses to enter.

2 Apple's position in mobile and related areas

As set out above, Apple has played a pivotal role in the development of modern mobile telecommunications. Its control and integration of hardware and software throughout its expanding ecosystem has tended to provide the simple, unified and intuitive user experience that drives the mainstream adoption of new technologies, features and services and leaves Apple in a powerful position in related markets.

Apple's power in mobile telecommunications markets appears to be greater than its market share might suggest, and appears to have allowed Apple to secure uniquely favourable arrangements with mobile network operators.

For example, as a new entrant into various mobile telecommunications markets in 2007, Apple was able to extract unprecedented concessions from mobile carriers in exchange for the exclusive right to carry the iPhone. Its arrangement with Cingular (now AT&T) in the United States marked a significant shift in power away from the mobile carriers, who were used to controlling most aspects of handset manufacture, supply and sale.

Apple's arrangements with AT&T reportedly gave Apple unprecedented control not only over the iPhone hardware and software but also over the features that AT&T would develop (such as Visual Voicemail) and the price at which AT&T would offer the iPhone to customers. It also included a revenue-sharing obligation under which AT&T would pay Apple $10 per month for every iPhone customer. When Apple decided to drop the upfront price of the iPhone, the revenue-sharing arrangement was replaced by an obligation on the carrier to subsidise the handsets.[164]

In the UK, Apple similarly secured an exclusive arrangement with O2, which reportedly allowed Apple to control the retail price of the iPhone and included a revenue-sharing arrangement which required O2 to return up to 40% of their iPhone revenues to Apple:

> Throughout discussions over marketing the iPhone in Europe, Apple has played off the UK's four main networks – O2, Orange, T-Mobile and Vodafone – against each other. All of them, at one stage, believed they had an exclusive deal for the British market…
>
> Orange and T-Mobile are understood to have signed contracts and at least one had Apple employees helping to implement the device on their networks. But at the 11th hour O2 snatched the UK deal with an offer that gave such a high proportion of revenues to Apple that none of its competitors could see any way of making any return on the phone,

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162 "Apple Said to Plan Limited, Low-Cost Streaming Service", *New York Times*, 17 March 2015.

163 "Apple Targets Electric-Car Shipping Date for 2019", *Wall Street Journal*, 21 September 2015.

164 "Life after the iPhone", *Forbes,* 2 January 2013.

> even over three years. They believed that even if it was treated as purely a loss-leading marketing product, a better return could be had by spending the money elsewhere…
>
> O2 will also have to spend a considerable amount of money installing the Edge technology which the iPhone needs to operate on its network, in the run-up to the device's launch this year.
>
> Neither O2, Orange, T-Mobile nor Vodafone would comment. During the long-running negotiations over the iPhone, all signed non-disclosure agreements.[165]

In France, Apple's five-year exclusive arrangement with Orange required Orange to pay Apple 30% of all iPhone customer revenues and reimburse half of Apple's iPhone advertising spend, up to €10 million. As in the United States, the revenue-sharing model was replaced by an obligation on Orange to subsidise iPhone handsets to customers at a level at least 20% higher than the subsidy it applied to other handsets.[166]

More recently it has been reported that Apple's arrangements with carriers have been investigated by the European Commission for requiring network operators to:

- supply iPhone handsets to their customers at a price that is significantly less than the wholesale price they pay Apple for those handsets, resulting in a subsidy;
- limit their subsidies of other handsets; and
- commit in advance to acquiring minimum volumes of iPhone handsets per year over up to three years.[167]

In Canada, the Competition Bureau is investigating aspects of Apple's arrangements with carriers and has sought information from carriers in relation to the way they determine prices for smartphones and service contracts and the number of devices the carriers are obliged to purchase from Apple. The Bureau has alleged that Apple's arrangements with carriers prevent the carriers from reducing the prices of handsets and service contracts for devices that compete with Apple devices.[168]

While these are only investigations and Apple's arrangements with carriers have never ultimately been found to be unlawful, the arrangements do suggest that Apple has had an unusual degree of influence in mobile markets since its entry and retains this influence irrespective of fluctuations in its market share.

This continuing influence is reflected in the comments of John Legere, CEO of T-Mobile in the United States – where it was the last major carrier to adopt the iPhone:

> Legere revealed that when he took over the reins of T-Mobile two years ago, his marching orders were to "get on your knees, crawl over there" to get the iPhone — previously, T-Mobile was the only major mobile operator in the U.S. not to officially carry the iPhone. "Seriously, your store without the iPhone in it is s—," he said, revealing he was willing to do whatever was needed to ink a deal with Apple.[169]

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165 "O2 wins Apple iPhone deal – at a hefty price", *The Guardian*, 17 September 2007.

166 Conseil de la Concurrence, Decision No.08-MC-01 of December 17, 2008.

167 "Apple accused of securing preferential terms for iPhone with mobile operators", *The Guardian,* 7 June 2013.

168 "Canada's competition watchdog seeks details from wireless carriers in Apple probe", *Globe and Mail,* 15 June 2015.

169 "John Legere interview: iPhone 6 worth begging for", *BGR*, 28 October 2014.

As discussed above, Apple exercises a high degree of control over its products and services. It often delays granting third-party access to its hardware and software features and generally grants this access on a limited and tightly prescribed basis.

For example, the iPhone was closed to third-party developers for its first year, and even now access is available only to developers who sell through the App Store and pay Apple's 30% commission on all sales. It is not possible for developers to distribute software directly from their own websites or through other aggregators or storefronts. Apple retains the discretion to reject apps submitted to the App Store based on quality, objectionable content, duplication of other apps, uselessness or lack of entertainment value, overly complex user interfaces, or assisting purchases other than through the App Store. The App Store guidelines run to 5000 words over 29 categories.

While Apple's tight control over its products and services in many cases contributes to the simplicity, consistency and stability of the user experience, it can do so at the expense of user choice and competition. As the Apple approach – typified by exclusivity, limited third-party access and a high degree of control – extends into new markets, its impact on choice and competition becomes more significant.

Attachment C – Summary of Apple Pay

Apple Pay allows users to register their credit or debit cards in the iOS Wallet app (formerly Passbook) by automatically adding a card associated with the user's iTunes account, scanning a card with the device's built-in camera or adding card details manually. Once a card is registered with the Wallet, users can easily make payments:

- within other apps to purchase goods or services; or
- in-store using contactless payments with NFC-capable devices at compatible point of sale terminals.

Payment may be authorised by the user presenting a registered fingerprint to the device's Touch ID scanner or by entering a numerical passcode. Generally an iPhone or iPad must be reauthorised for each payment, while an Apple Watch will remain authorised for as long as it remains on the user's wrist.

Contactless payments require a near field communications (**NFC**) controller and antenna to communicate between the device and the payment terminal. The Apple iPhone 6, 6 Plus, 6S 6S Plus and SE are the only Apple smartphones with built-in NFC capability. However, the Apple Watch also has built-in NFC capability, and may be paired with an iPhone 5, 5C or 5S to allow users of those older devices to access Apple Pay.

Card information is not stored on any Apple device but is encrypted and sent via Apple to the issuing bank for approval. The issuing bank or the card network will then generate and return a randomised Device Account Number (also called a payment token) that is unique to each device and each card. It is this Device Account Number, rather than the original card number, that is stored on the Apple device – specifically on a dedicated chip that operates as a Secure Element (**SE**) and is isolated from the rest of the device.

It is also this Device Account Number that is transmitted from the device to merchant terminals, along with a dynamic one-time-use security code (also called a token cryptogram), in order to validate and complete a transaction via contactless payment.

After initial setup of a card on a device, Apple is no longer part of the payment process, but Apple contractually requires issuing banks to keep track of payments coming through Apple Pay and to periodically pay Apple a proportion of the credit card transaction or interchange fees associated with these payments. Interchange fees vary widely but average around 2% of transaction value for credit card payments in the United States.

It has been reported that under Apple's initial contracts with US issuers:

- issuers must pay Apple 0.15% of the transaction amount for credit card transactions and 0.5 cents for each debit card transaction, via the relevant card networks;
- issuers must pay Visa 7 cents and MasterCard 50 cents for each card tokenized and added to an Apple Wallet;
- issuers are not permitted to recover any Apple Pay costs from cardholders and must absorb their own development costs for participating in the program;
- issuers must make available to Apple Pay at least 95% of their cards branded with a participating network (eg Visa, MasterCard or American Express) excluding ATM-only cards, gift cards and some others; and

- issuers must provide Apple with a range of aggregated data and statistics relating to their Apple Pay activity.[170]

It has also been reported that, due to regulated interchange fees in Europe, which are capped at 0.2% for debit transactions and 0.3% for credit transactions, Apple may only receive "a few pence per £100 transaction" from banks using Apple Pay in the UK.[171]

Credit card interchange fees have been held at 1.5% in Canada following government pressure.[172] It has been suggested that Canadian banks might be asked to pay between 0.15% and 0.25% of the value of credit card transactions to Apple, potentially higher than the rates charged in the United States.[173]

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170 John Stewart, "Issuers' Apple Pay Pact Assigns Remarkable Authority to Card Networks As Well As Apple", *Digital Transactions*, 27 October 2014.

171 Martin Arnold, Andrea Felsted and Daniel Thomas, "UK banks put squeeze on Apple Pay fees", *Financial Times*, 14 July 2014.

172 "Visa and MasterCard cut Canada fees amid State pressure", *Bloomberg*, 5 November 2014.

173 Rita Trichur and Daisuke Wakabayashi, "Apple Pay Plans to Launch in Canada This Fall", *Wall Street Journal*, 17 April 2015.

Collective Negotiation by Issuers with Mobile Wallet Providers

Economic Assessment of the Benefits and Detriments

Prepared for

Gilbert + Tobin

Level 35, Tower Two
International Towers Sydney
200 Barangaroo Avenue
Barangaroo NSW 2000

Prepared by

Dr Geoff Edwards

Level 22, Tower 2, 101 Grafton Street
Bondi Junction NSW 2022
Australia

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CRA Charles River Associates

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EXECUTIVE SUMMARY

1. A number of Australian credit and debit card issuers ("the applicants") are seeking authorisation to collectively negotiate with third party mobile wallet providers (i.e. providers of mobile wallets that are not themselves card issuers or card schemes, such as Apple) on matters related to exclusivity for third party mobile wallets on particular mobile devices and restrictions on pass-through (i.e. whether customer charges reasonably reflecting the additional costs of using third party mobile wallets may be applied by the applicants).[1] The applicants also seek authorisation to negotiate collectively with respect to security standards. The applicants seek authorisation only with respect to these matters.

2. This report considers the public benefits and detriments of collective negotiation by the applicants with Apple in particular (as one of the most significant third party mobile wallet providers globally and in Australia) in relation to these matters.

3. I expect the likely counterfactual in the absence of collective negotiations to be one in which eventually all issuers will be persuaded to reach agreements with Apple that accept exclusivity for Apple Pay on iOS devices (as well as restrictions on pass-through of Apple's fees), due to the competitive disadvantages that issuers will face as long as they do not have agreements to be part of Apple Pay, and given the importance for issuers of iOS device users as a customer segment.

4. Collective negotiation in relation to exclusivity strengthens the bargaining position of the applicants and increases the likelihood that Apple will agree to waive or relax Apple Pay exclusivity in some way. A waiver or relaxation of exclusivity is likely to bring significant public benefits in the form of greater choice, lower prices, better quality, lower fees for the use of Apple Pay and greater investment and innovation in mobile wallet technology. A waiver or relaxation of exclusivity may, at the same time, mean the loss of potential public benefits associated with exclusivity, such as incentives for investment, reductions in search costs, the avoidance of compatibility costs and quality assurance. However, the potential benefits of exclusivity are limited on the facts of this case, and their loss is likely to be outweighed by the significant benefits of a waiver or relaxation of exclusivity.

5. Collective negotiation also offers the potential for the applicants to obtain a waiver or relaxation of Apple's demands in relation to restrictions on pass-through. This brings with it the potential for the applicants to set price signals to their customers that reasonably reflect the additional costs of using Apple Pay and to recover those costs from the customers that cause them. This would allow for consumers to make more efficient decisions when deciding between different methods of payment (avoiding over-use of Apple Pay), promote efficient competition between alternative payment methods and avoid the distributional inequities that arise when restrictions on pass-through are applied.

6. There are also likely to be net public benefits from collective negotiation with Apple in relation to a common set of security standards. This would enable the entire system and all participants, including consumers, to benefit from the efficiencies of a single set of

[1] In this matter, authorisation of a parallel collective boycott of individual negotiations is a necessary complement to authorisation of collective negotiation, and the applicants are applying for both. Therefore, in the remainder of this executive summary, references to collective negotiation include a parallel collective boycott of individual negotiations.

negotiations over these matters and a consistent industry-wide set of standards that minimises fraud and maximises consumer confidence in mobile payments.

7. There is a possibility that collective negotiation will lead to failed negotiations between Apple and the applicants, and that Apple Pay would then not be functional with respect to cards issued by the applicants. This, however, is only a possibility, and it seems likely that Apple and the applicants will ultimately reach agreements in relation to Apple Pay, either through collective negotiations, or, subsequently, individual negotiations, given the reputational damage and customer dissatisfaction that they would otherwise experience, as well as the loss of customers that the applicants in particular would experience (to issuers that have reached agreements with Apple). In any event, the possibility of failed negotiations needs to be considered against the likely counterfactual if collective negotiations are not allowed, which is that Apple will be unconstrained and able to charge excessive fees for Apple Pay, there will be excessive and inefficient use of Apple Pay at the expense of less costly payment methods, and Apple's fees from Apple Pay will be inefficiently and inequitably recovered across all banking customers rather than from those that cause them.

8. I therefore conclude that there are likely to be net public benefits of collective negotiation by the applicants with Apple in relation to exclusivity, restrictions on pass-through and security standards.

1. INTRODUCTION

9. A number of Australian credit and debit card issuers[2] ("the applicants") are seeking authorisation to collectively negotiate with (and, in parallel, collectively boycott individual negotiations with) third party mobile wallet providers (i.e. providers of mobile wallets that are not themselves card issuers or card schemes such as Apple) on matters related to exclusivity for third party mobile wallets on particular mobile devices and restrictions on pass-through (i.e. whether customer charges reasonably reflecting the additional costs of using third party mobile wallets may be applied by the applicants).[3] The applicants also seek authorisation to negotiate collectively with respect to security standards. The applicants seek authorisation only with respect to these matters.

1.1. Instructions

10. Gilbert + Tobin has asked that Charles River Associates (CRA) prepare this independent expert economic report on the public benefits and detriments of authorisation of collective negotiations by the applicants with Apple in particular (as one of the most significant third party mobile wallet providers globally and in Australia) in relation to mobile wallet exclusivity, restrictions on pass-through and security standards.

1.2. Experience and qualifications

11. Dr Geoff Edwards is a Vice President in CRA's Asia Pacific and European Competition Practices and is based in Sydney, having spent ten years with CRA in London until the end of 2013. Dr Edwards is a specialist in competition and regulatory economics with more than ten years of economic consulting experience in industries including banking, financial data, financial clearing, software, pharmaceuticals, telecommunications, broadcasting, transport, food production and manufacturing. Dr Edwards has a Masters in Economics and a PhD from the University of California, Berkeley, as well as first class honours degrees in economics and law from the Australian National University.

1.3. Report structure

12. In Section 2, I set out some background on mobile wallet technology and developments, and in Section 3, I summarise the application for authorisation, including its delimited scope and the rationales for the application.

13. In Section 4, I consider the likely counterfactual in the absence of collective negotiation in relation to exclusivity, and in Section 5, I consider the likely outcome if collective negotiation in relation to exclusivity is authorised. The likely counterfactual and the likely outcome of authorisation are relevant, as the extent of benefits and detriments from authorisation depend on these.

14. In Sections 6 and 7, I discuss the public benefits and detriments of the proposed authorisation with regard to exclusivity, and in Sections 8 and 9, I discuss the public benefits

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2 In this report, references to "issuers" includes references to entities such as Cuscal that provide "white label" card and payment services to a number of card issuers.

3 In this matter, for the reasons that I explain in Section 5, authorisation of a parallel collective boycott of individual negotiations is a necessary complement to authorisation of collective negotiations. Therefore, in the remainder of this report, references to collective negotiation include a parallel collective boycott of individual negotiations.

and detriments of the proposed authorisation with respect to restrictions on pass-through and security standards, respectively.

15. Finally, in Section 10, I conclude with my opinion on whether there is likely to be a net public benefit or detriment of the proposed authorisation.

2. BACKGROUND ON MOBILE WALLETS AND MOBILE PAYMENTS

2.1. Overview of mobile wallets and mobile payments

16. In principle, mobile payments include any payment method available on mobile devices, including online shopping via merchant apps or websites, online wallets such as PayPal, direct peer-to-peer payment applications or websites and "QR code" payments.[4] However, my focus in this report is on mobile payments made using "near field communication" (NFC) technology. NFC mobile payments take place when a user places an NFC equipped mobile device near a merchant terminal that is compatible with NFC.

17. The NFC technology for mobile payments is the same technology as that used in contactless card payments: the NFC chips in contactless cards are essentially equivalent to the NFC chips embedded in many mobile devices. In Australia there is already a wide distribution of merchant terminals that accept contactless card payments via NFC technology as well as widespread consumer acceptance of contactless technology and contactless payments. Therefore, among the various mobile payment methods, NFC mobile payments hold significant promise for rapid and widespread adoption, as the NFC ecosystem is already in place.

18. Visa and RFi view the potential for mobile payments in Australia as follows:

> *Although mobile payments are still in their infancy in Australia, there is potential for explosive growth. Australia has high penetration of contactless-enabled terminals, high levels of smartphone ownership, and widespread use of contactless payments. Indeed, once consumers have made the transition to contactless card usage, they are on the evolutionary path to mobile payments. This "payments evolution" sees consumers become increasingly digital and increasingly open to a mobile contactless experience.*[5]

19. Mobile wallets are applications for mobile devices (e.g. smartphones, tablets, smartwatches) that facilitate mobile payments and may also contain related information such as stored values for use with particular merchants, loyalty cards, membership cards, boarding passes, event tickets, etc. My focus in this report is on mobile wallets that facilitate

4 QR code payments are where users make payments from stored amounts or linked accounts by displaying a two dimensional barcode to a compatible scanner.

5 Visa and RFI, *The Visa-RFi Group Australian Payments Report: The changing payments behaviour of Australian consumers and the impact on banking relationships*, June 2015, page 24, accessed at: http://www.visa.com.au/aboutvisa/research/include/Visa_RFi_Australian_Payments_Report.pdf.

or operate in conjunction with NFC mobile payments. According to research commissioned by CBA, mobile wallets "are expected to replace physical wallets in Australia by 2021".[6]

2.2. Integrated and non-integrated mobile wallets

20. In this report I distinguish between integrated mobile wallets and other mobile wallets. References to "integrated mobile wallets" are to mobile wallets that are integrated with NFC (or other) hardware embedded within the mobile device, such that the mobile wallet application communicates directly with the hardware used to make payments.[7] This is in contrast to a mobile wallet that operates in conjunction with an external NFC "sticker" attached to the back of the device by the user. When using an NFC "sticker" the mobile wallet application does not communicate directly with the NFC chip.

21. I understand that NFC stickers are generally considered by issuers to be temporary "workarounds" and "dumb" alternatives to integrated mobile wallets. As stickers are essentially just miniature contactless payment cards attached to the back of mobile devices, they do not allow for direct communication between the mobile wallet and the NFC hardware. They consequently do not allow for the seamless customer experience of mobile wallets and mobile payments that integrated mobile wallets provide, and consequently tend not to be regarded as good substitutes from the perspective of issuers (or consumers that seek greater functionality than their contactless cards already provide). For example, only an integrated mobile wallet is able to:

    a. Store the details of multiple cards and switch between them easily;

    b. Secure transactions in particular ways such as with fingerprints;

    c. Tokenise payment credentials so that merchants do not receive or retain credentials that can be exploited;

    d. Preview and confirm transactions on the mobile device and view them (and, potentially, their effects on account balances and credit limits) as soon as they are completed; and

    e. Potentially make payments of greater amounts (due to increased security).

22. Potential issues may also arise if an NFC sticker is attached to a device that is also operating an active integrated mobile wallet. Since there is no way to turn off the NFC sticker, attempts to pay using the integrated mobile wallet would be likely to suffer from interference and unpredictable results as the merchant terminal would attempt to read from two different NFC chips. This is similar to the "card clash" experienced with multiple physical contactless cards in close proximity.

23. Given that NFC stickers add very little to a consumer's payment experience compared to a physical contactless card, and at the same time compromise the attractiveness and resale value of the mobile device (NFC stickers cannot easily be removed), they are limited in their ability to displace contactless card payments and cash as payment methods. By contrast,

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6 CBA, *Commbank Reveals Mobile Wallet Tipping Point*, CBA Media Release, 21 March 2014, accessed at: https://www.commbank.com.au/about-us/news/media-releases/2014/commbank-reveals-mobile-wallet-tipping-point.html.

7 I also distinguish in this report between integrated mobile payments and other mobile payments. References to integrated mobile payments are to mobile payments made using an integrated mobile wallet via the NFC hardware embedded within the mobile device.

integrated mobile payments using the NFC hardware embedded in the device offer considerable differentiation and enhanced consumer experience compared to physical contactless card payments, and therefore promise far greater potential to displace physical cards and cash as payment methods.

2.3. Differentiation between mobile wallets

24. Issuer proprietary mobile wallets are mobile payment applications provided by issuers. They are typically limited in terms of the card details that they hold to cards of the particular issuer. Issuer proprietary mobile wallets may be stand-alone mobile payment apps or they may be integrated with a general mobile banking app provided by the issuer that allows the customer to check account balances and credit limits, make transfers between accounts and BPay transfers, and change security settings (such as whether to allow overseas payments). Where the issuer is a bank, it is possible for the mobile wallet to be used not only to make payments, but also to make withdrawals from ATMs. Where the issuer is a merchant (e.g. Coles) the mobile wallet may contain loyalty card details specific to that merchant and offer benefits to the user relating to that merchant (e.g. loyalty scheme offers).

25. I define third party mobile wallets as mobile wallets provided by parties that are not themselves issuers or card schemes. Examples include Apple's Apple Pay, Google's Android Pay and Samsung's Samsung Pay. An important distinguishing feature of third party mobile wallets is their potential to interject themselves into the financial matrix of the payments system. Apple, for example, typically requires that participating issuers contribute to Apple a percentage of each transaction made using Apple Pay.

26. Another key distinguishing feature of third party mobile wallets is that they provide consumers with the ability to store and choose between cards issued by a number of different issuers, rather than just one. A potential further distinguishing feature of Apple Pay is that it may soon facilitate peer-to-peer transfers, which may generate network effects for Apple Pay.[8]

27. Currently, however, the Apple Pay third party mobile wallet is limited in terms of its functionality to making payments and storing loyalty and discount cards. While it is possible within Apple Pay to see recent transactions associated with a card, there is currently no capability to view account balances and credit limits, make transfers between accounts or through BPay, or change security settings. As such it shares only limited functionality with an issuer proprietary mobile wallet that is integrated with a general mobile banking app.

28. Individual mobile wallets will also be differentiated in a myriad of other ways, such as in relation to the security mechanisms that they employ and the incentives that they provide to consumers to make use of them instead of other mobile wallets or other payment methods (such as loyalty points or cashback incentives).

2.4. Mobile wallets in Australia

29. As mentioned, in Australia there is already a wide distribution of merchant terminals that accept contactless card payments via NFC technology as well as widespread consumer

8 See, for example, Robin Sidel and Daisuke Wakabayashi, "Apple, Banks in Talks on Mobile Person-to-Person Payment Service," *Wall Street Journal*, 11 November 2015, accessed at: http://www.wsj.com/articles/apple-in-talks-with-u-s-banks-to-develop-mobile-person-to-person-payment-service-1447274074.

acceptance of contactless payments. This contrasts with the situation in the United States, where mobile payment adoption faces the significant barrier of a low proportion of merchants with NFC capable terminals and a base of consumers that is unfamiliar with (and largely distrusting of) contactless payments.

30. Australian issuers are also recognised as world-leaders in adopting payment system innovations, including contactless cards and terminals. Most Australian issuers have for some time provided their customers with general mobile banking apps for all devices (iOS, Android and Windows) that allow for account balance checks, transfers between accounts and BPay, among other services. A number of them also already have or are well progressed in developing their own issuer proprietary mobile wallets.

    a. CBA and Westpac, in particular, already have integrated mobile wallets for Android devices, and CBA also uses NFC stickers in conjunction with its mobile wallet for iOS devices and devices without integrated NFC capability. These mobile wallets are integrated as part of general mobile banking apps.

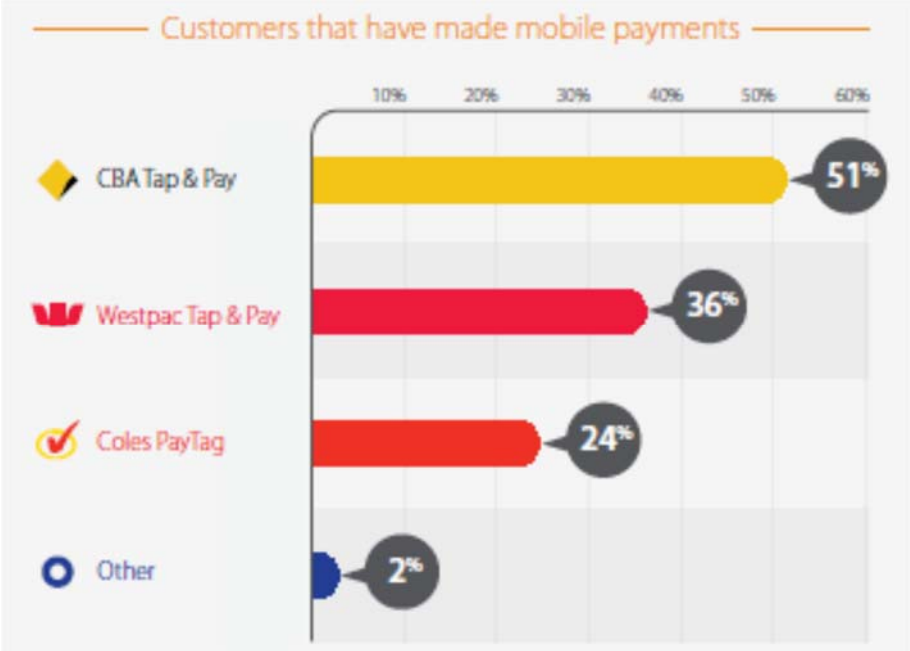
    b. ANZ is developing a stand-alone mobile wallet for Android devices (separate from its general mobile banking app).

    c. Cuscal provides a white label mobile wallet NFC payment solution to its customers, either stand-alone or integrated with the customer's bank-branded general mobile banking app. This solution includes integrated NFC payment capability for NFC-capable Android devices and non-integrated NFC stickers for iOS devices and devices that are not NFC-capable.

    d. Another notable mobile payments player is the retailer Coles, which has its own mobile wallet that facilitates mobile payments using a Coles issued credit card. The mobile payments are performed using an NFC sticker, which is provided together with a flybuys barcode on a "Pay Tag" that the customer attaches to the back of their mobile device. This allows the customer to use the Pay Tag to both collect flybuys points and make payments. The Coles credit card app provides access to the customer's account balance, available credit and transaction history. It also allows customers to view their flybuys account points balance and activate flybuys offers. The app is rated 4.5 stars on the App Store and 5 stars on Google Play.

31. The following figure illustrates that, as of February 2015, the CBA and Westpac mobile wallets were leading mobile payments using NFC technology in Australia, with the Coles mobile wallet not far behind.

Figure 1: Visa-RFi – Customers that have made mobile payments



Source: Visa-RFi Group Australian Payments Survey, February 2015

32. In addition to these issuer proprietary mobile wallets, Apple Pay launched in Australia in November 2015. In Australia, Apple Pay is currently supporting AmEx cards issued by American Express (as opposed to AmEx "companion" cards issued by Australian banks) and, since 29 April 2016, cards issued by ANZ.[9] Apple has yet to reach agreements with other Australian issuers.[10]

2.5. Apple's negotiations with issuers in relation to Apple Pay

33. I understand that in negotiations in relation to Apple Pay with issuers in the United States and the United Kingdom, Apple has managed to obtain a number of conditions that it is likely also to seek in negotiations with issuers in Australia. In particular, Apple enjoys technological exclusivity with regard to the NFC hardware in iOS devices and I understand that Apple has retained that exclusivity, meaning that issuers in the United States and the United Kingdom cannot offer proprietary integrated mobile wallets on iOS devices. I also understand that Apple has obtained agreements that issuers will pay Apple a percentage of each transaction made using Apple Pay and that issuers will not pass-through Apple's charges to customers. I understand that, at least in the United States, Apple largely dictated terms to the issuers.[11]

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9 See James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

10 See above note 9. See also Shaun Drummond, "Apple Pay switched on in Australia, but only for Amex," *Sydney Morning Herald*, 18 November 2015, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-switched-on-in-australia-but-only-for-amex-20151118-gl1vbv.html.

11 See, for example, Karen Webster, "Will Apple Own the Payments Customer," *pymnts.com*, 14 September 2015, accessed at: http://www.pymnts.com/news/2015/will-apple-own-the-payments-customer/.

3. THE APPLICATION FOR AUTHORISATION

34. The applicants are seeking authorisation to collectively negotiate with third party mobile wallet providers such as Apple on matters related to exclusivity for third party mobile wallets on particular mobile devices and restrictions on pass-through (i.e. whether customer charges reasonably reflecting the additional costs of using third party mobile wallets may be applied by the applicants). The applicants also seek authorisation to negotiate collectively with respect to security standards.

35. The applicants seek authorisation to negotiate collectively only with respect to these matters. In particular, collective negotiation would not be in relation to other commercial matters such as pricing.

36. According to the application, the applicants:

> *wish to encourage the introduction of mobile wallet and mobile payment services in Australia in a manner that best promotes: competition, customer choice and confidence, innovation and investment in mobile payments; and the security, stability and efficiency of the payments system.*[12]

37. The rationale for the application in relation to third party mobile wallet *exclusivity* is a concern that in a counterfactual of individual negotiations between each issuer and a third party mobile wallet provider that has a strong bargaining position, each issuer may find that it is compelled to accept exclusivity due to the impact on its competitive position if it does not and is then unable to offer its customers the ability to use the third party mobile wallet. This concern applies in particular in relation to Apple and Apple Pay, due to Apple's share of mobile devices in Australia, and the considerable potential importance of Apple's range of iOS devices (iPhones, iPads and iWatches) and iOS device users (who tend to be wealthy and early adopters of new technology) when it comes to adoption of mobile payments and competition between issuers. The applicants are therefore concerned that individual negotiations in relation to exclusivity may lead to a situation in which there is no effective competition in terms of mobile wallets and mobile payments on certain devices (in particular, iOS devices) and in which there is less investment in mobile wallet technology as a whole. The applicants hope that collective negotiation will alter the relative bargaining positions between the applicants and Apple and thereby achieve a waiver or relaxation of Apple's policy of exclusivity for Apple Pay, which they expect to result in a more competitive outcome in relation to mobile wallets and mobile payments on iOS devices.

38. The rationale for the application in relation to collective negotiations over restrictions on pass-through is similar. Individual negotiations with a significant third party mobile wallet provider may result in acceptance of demands for restrictions on pass-through, due to the impact on the competitiveness of issuers that do not accept these terms. In the context of exclusivity and in the absence of an option for issuers to pass-through the third party mobile wallet provider's charges to customers, it is expected that the exclusive third party mobile wallet provider will have the ability to set high fees to issuers for the use of the mobile wallet, as customers will not face any signals in relation to the additional costs of using the mobile wallet compared to using other forms of payments. This is expected to lead to inefficient over-use of the third party mobile wallet instead of other payment methods. At the same

12 *Application for Authorisation of Limited Collective Negotiation in relation to Mobile Wallet and Mobile Payment Systems*, page 4.

time, the incidence of those fees will be on the issuers initially, and in the absence of an ability to charge the customers that are causing the fees, issuers are likely to recover the fees across their entire customer base, which raises distributional as well as further efficiency concerns. The applicants hope that collective negotiation in relation to restrictions on pass-through will alter the relative bargaining positions and achieve an outcome in which the additional costs of mobile payment methods may be reasonably reflected to, and recovered from, the customers that cause the costs.

39. The rationale for the application in relation to collective negotiations over *security standards* is to ensure an industry-wide consensus on standards that will ensure the "safety and integrity of the entire payment system, as well as customer, merchant and industry confidence" in mobile wallets and mobile payments. This is in a context in which third party mobile wallet providers have incentives to make the process of "on-boarding" consumers (i.e. adding their card details to the mobile wallet) as "frictionless" as possible, but at the same time there is considerable risk of fraud that will be borne by issuers.

40. The application for authorisation of a collective boycott of individual negotiations (while collective negotiation is ongoing) is part and parcel of the application for authorisation of collective negotiation. The two go necessarily together. Without authorisation of a parallel collective boycott, the purpose and potential benefits of authorisation of collective negotiation would be denied. This is because, as just mentioned, the applicants hope that collective negotiation will alter the relative bargaining positions between the applicants and Apple, but if a parallel collective boycott is not also authorised, there will remain scope for parallel individual negotiations, and bargaining positions will be unchanged. In short, without a parallel collective boycott, the ability to engage in collective negotiation will have little meaning.

4. THE LIKELY COUNTERFACTUAL IN THE ABSENCE OF COLLECTIVE NEGOTIATION

41. In order to assess the public benefits and detriments of the proposal for collective negotiation by the applicants with respect to third party mobile wallet exclusivity, it is first necessary to consider (i) the likely counterfactual in the absence of collective negotiation and (ii) the likely outcome if collective negotiation is authorised. This section considers the likely counterfactual, while the following section considers the likely outcome of authorisation.

4.1. Introduction

42. Although the application for authorisation of collective negotiation is stated in general terms with respect to all third party mobile wallet providers, my focus in this report is on negotiations between issuers and Apple in relation to the Apple Pay integrated mobile wallet on iOS devices. This is because I understand that Apple is the only third party mobile wallet provider that has a policy of exclusivity for its mobile wallet with respect to certain devices.

43. In particular, I understand that through technological restrictions and/or contractual terms, Apple seeks to ensure that Apple Pay is the only integrated mobile wallet on iOS devices. Whether Apple does so technologically (by refusing to license the APIs necessary for rival mobile wallets to integrate with the NFC hardware in iOS devices) or contractually (by insisting on exclusivity terms favouring Apple Pay in agreements with issuers), or both,

does not ultimately matter: both API licenses and contractual terms can, in principle, be matters for negotiation between issuers and Apple.

44. I understand that in other countries in which Apple Pay has been introduced (notably, in the US and the UK), Apple has achieved exclusivity for Apple Pay to the exclusion of other mobile wallets on iOS devices. I also assume that Apple's agreements with American Express and ANZ preserve exclusivity for Apple Pay with respect to iOS devices, although I am not privy to those agreements.

45. I also understand that in other markets Apple has insisted on secrecy of negotiations[13] and that Apple is doing likewise here in Australia.[14] This leaves each issuer uncertain whether its competitors are also in negotiations or have already reached agreements accepting exclusivity. This enhances Apple's ability to persuade issuers to accept Apple's terms on a "take it or leave it" basis, given the risk of otherwise being placed at a competitive disadvantage.

46. As mentioned in Section 2.4, Apple Pay has already launched in Australia, and is now supporting payments using cards issued by American Express and ANZ. This is likely to be placing further pressure on other Australian issuers to reach agreements with Apple.[15]

47. It has been widely reported that a major stumbling block in Apple's negotiations with the major Australian issuers has been the fees that Apple seeks to charge the issuers for payments made using Apple Pay.[16] However, I understand that other major issues that remain to be negotiated are whether Apple Pay should enjoy exclusivity on iOS devices and Apple's demand for restrictions on pass-through to customers of Apple's fees.

48. As also explained in Section 2.4, Australian issuers are already themselves active in mobile wallet technology. A number of them already offer or are close to offering mobile wallets with mobile payment functionality for Android devices (integrated with the NFC hardware in those devices) and for iOS devices (using NFC stickers). As explained in Section 2.3 above and in Section 6 below, issuer proprietary mobile wallets offer functionalities and perceptions of security that third party mobile wallets do not. They therefore have the

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13 See, for example, Nathaniel Popper, "Banks Did It Apple's Way in Payments by Mobile," *New York Times*, 11 September 2014, accessed at: http://dealbook.nytimes.com/2014/09/11/banks-did-it-apples-way-in-payments-by-mobile/?_r=0.

14 See James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

15 See the references to customer pressure and threats of switching in James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

16 For example, see James Eyers, "$2b fee sticking point as Apple wrangles with Australia's big four banks," *Australian Financial Review*, 17 August 2015, accessed at: http://www.afr.com/technology/apple-pay-being-repelled-b-big-banks-20150815-gizz6y. It has also been suggested that the reason Apple was able to reach an agreement with American Express is that American Express' interchange fees are not regulated, and as a result there is more room available for American Express to afford the fees that Apple would like to charge for Apple Pay.

potential to deliver significant value to consumers and to drive the take-up of mobile payments if allowed to operate on mobile devices.

49. My understanding is that the applicants believe that competition and choice among integrated mobile wallets on iOS devices would benefit Australian consumers as well as themselves. To be clear, the applicants are not seeking to prevent Apple from offering Apple Pay on iOS devices or to limit the range of cards that can be used with Apple Pay. They instead believe that consumers would be best served by competition and choice between all potential integrated mobile wallet offerings that satisfy certain security standards.

50. Although the applicants believe that exclusivity would be against their individual interests and the interests of Australian consumers, they are concerned that, without collective negotiation, Apple may have success with a "divide and conquer" strategy in which Apple persuades each issuer to accept exclusivity by playing each issuer off against the others with the prospect that unless an issuer agrees to exclusivity, it will find itself at a competitive disadvantage, as its competitors will be able to offer customers the ability to use Apple Pay while it will not. Recent news media suggests that this dynamic is already at work.[17]

4.2. The Prisoners' Dilemma facing issuers in individual negotiations with Apple

51. In economic terms, the applicants are describing a Prisoners' Dilemma[18] in which it would be in their collective interests to resist exclusivity, however in individual negotiations with Apple each issuer may have a dominant strategy to accept exclusivity, and the equilibrium outcome may therefore be sub-optimal. The following sub-section elaborates on this Prisoners' Dilemma.

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17 Again, see James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

18 The Prisoners' Dilemma is a well-known game-theoretic paradox. In the Prisoners' Dilemma, two prisoners are awaiting trial for crimes that they are alleged to have committed together. Prosecutors offer each of them a deal that involves a longer prison sentence for both if they both betray each other than if they both stay silent, and freedom for one and an even longer sentence for the other if the first betrays the second and the second stays silent. The following table illustrates the payoffs (in prison terms) in a Prisoners' Dilemma, with lower payoffs being preferred to higher payoffs.

Prisoner 1 \ Prisoner 2	Betray	Silent
Betray	(2 years / 2 years)	(0 years / 3 years)
Silent	(3 years / 0 years)	(1 year / 1 year)

It can be seen from the table that there is a "dominant strategy" for each prisoner to betray the other, meaning that for each prisoner it is better to betray regardless of what action the other prisoner takes. For example, if Prisoner 2 will betray, then Prisoner 1 will do better by also betraying (2 year jail term) than by staying silent (3 year jail term). Similarly, if Prisoner 2 will stay silent, then Prisoner 1 will do better by betraying (freedom) than by also staying silent (1 year jail term).

This leads to an equilibrium (shaded in grey) in which both prisoners betray each other, whereas both would be better off if they were somehow able to coordinate to both stay silent. In other words, the dominant strategies lead to an equilibrium that is sub-optimal for both prisoners. They are unable to reach the mutually beneficial outcome (both remaining silent) because they are unable to coordinate to overcome their dominant strategies.

52. The key features that drive the Prisoners' Dilemma facing issuers when in individual negotiations with Apple are:

    a. The importance for issuers of iOS device users as customers and the propensity of iOS users to value the ability to make mobile payments;

    b. The limited substitutability of iOS device users to non-iOS devices; and

    c. The competition that exists between issuers for personal current accounts, credit card accounts and the use of debit and credit cards for payments.

53. Together, these features conspire to give Apple considerable bargaining leverage over issuers in the context of individual negotiations, and have the potential to generate Prisoners' Dilemma payoffs for issuers, as discussed below.

4.2.1. The importance of iOS device users for issuers and the propensity of iOS device users to value the ability to make mobile payments

54. The segment of customers of Australian issuers that are also iOS device users is significant. To start with, Apple's share of smartphone sales in Australia is around 40%[19] and its share of other mobile devices is likely to be similar. According to Kantar research, Apple's iOS operating system for mobile devices holds a larger share of smartphone sales in Australia than in any other country surveyed by Kantar (including the US and the UK) with the exception of Japan.[20] What is more, Deloitte survey data suggests that among 18-44 year olds (which is the segment of the population that is most digitally engaged and most likely to adopt mobile payments) Apple's share is 46%.[21]

55. Therefore, in terms of its size alone, issuers cannot easily ignore this segment of customers. However, the importance to issuers of iOS device users is significantly greater than these market share figures indicate. Users of iOS devices tend to be wealthier[22] and are consequently likely to conduct more point of sale transactions and larger transactions than other customer segments. They therefore represent a particularly significant and valuable segment of customers for issuers to seek to retain and attract. Although I do not have a precise figure, it seems likely that iOS device users together account for more than 50% of total consumer spending in Australia.

56. At the same time, the propensities of Apple users to be at the forefront of the adoption of initially niche technologies that become mass-market products, and to value the ability to make mobile payments (given the addiction and emotional attachments of iOS device users

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19 According to Kantar research, in the three months to December 2015 the iOS share of smartphone sales was 39.6%: see http://www.kantarworldpanel.com/global/smartphone-os-market-share/. According to Deloitte, Apple held a 41% share of smartphones in 2015 (up from 38% in 2014): Deloitte, *Mobile Consumer Survey 2015 – The Australian Cut*, page 11.

20 See http://www.kantarworldpanel.com/global/smartphone-os-market-share/.

21 Deloitte, *Mobile Consumer Survey 2015 – The Australia Cut*, page 11, accessed at: http://landing.deloitte.com.au/rs/761-IBL-328/images/deloitte-au-tmt-mobile-consumer-survey-2015-291015.pdf?mkt_tok=3RkMMJWWfF9wsRokvaTLcu%2FhmjTEU5z16O4sWK%2Bzi4kz2EFye%2BLIHETpodcMT8RlPbvYDBceEJhqyQJxPr3CKtEN09dxRhLgAA%3D%3D.

22 See, for example, Todd Hixon, "What Kind of Person Prefers an iPhone," Forbes, 10 April 2014, accessed at: http://www.forbes.com/sites/toddhixon/2014/04/10/what-kind-of-person-prefers-an-iphone/.

to their devices as well as the value that they place on simplicity and convenience),[23] mean that this segment of customers is perhaps the most likely segment to embrace mobile payments. According to RFi, iOS device users are twice as likely as Android device users to find the idea of a digital wallet appealing.[24] This is despite the fact that at the time of the survey iOS device users did not have the option of an integrated mobile wallet, whereas Android device users had a number of integrated mobile wallets available.

57. The primacy that this segment of users place on their mobile device as a facilitator of all their interactions with the world means that this segment is also likely to have a propensity to switch between issuers on the basis of whether issuers offer the ability for them to use their devices to make integrated mobile payments. This segment of customers is also unlikely to be satisfied with mobile wallets that lack integrated mobile payment functionality and rely on "dumb" non-integrated workarounds such as NFC stickers. Instead, this segment is likely to tend to expect integrated mobile wallet functionality and will have a tendency to make use of any integrated mobile wallet solution provided directly by Apple.

4.2.2. The lack of substitutability of iOS device users to non-iOS devices

58. If it were possible for issuers to persuade iOS device users that wish to make mobile payments to switch to non-iOS devices, this would considerably strengthen the bargaining position of issuers when in individual negotiations with Apple over exclusivity for Apple Pay. If this were possible, issuers would have the outside option, if negotiations with Apple were to break down, of retaining (and attracting) customers that have strong preferences for making mobile payments by offering those customers issuer proprietary mobile wallets and third party mobile wallets on *non-iOS* devices and suggesting that they switch devices.

59. Of course, in reality the prospects are extremely remote that issuers can retain and attract iOS device users that have preferences for making mobile payments by persuading them to switch to non-iOS devices. This is for two reasons.

    a. First, from the perspective of most iOS device owners, iOS devices and non-iOS devices are differentiated products and not close substitutes (even if there were zero switching costs).

    b. Second, even for those iOS device owners that might view certain non-iOS devices as substitutes, there are significant switching costs associated with switching devices, including the fixed cost of the new device and also the costs associated with moving from one "ecosystem" to another. These switching costs will preclude all but a very small proportion of iOS device owners from switching to non-iOS devices purely in order to be able to use their issuers' cards to make mobile payments if their issuer does not have an agreement with Apple for Apple Pay.

60. This means that Apple does not need to fear any significant substitution away from iOS devices to non-iOS devices if it does not reach agreements with Australian issuers. This

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23 See Todd Hixon, "What Kind of Person Prefers an iPhone," Forbes, 10 April 2014, accessed at: http://www.forbes.com/sites/toddhixon/2014/04/10/what-kind-of-person-prefers-an-iphone/; and Linda Federico-O'Murchu, "Why people pick Team Apple versus Team Android," *CNBC*, 19 January 2015, accessed at: http://www.cnbc.com/2015/01/19/why-people-pick-team-apple-versus-team-android.html.

24 Ian Rogers and John Kavanagh, "Apple reports strong US Apple Pay rollout numbers – no word on Australia," *Banking Day*, 2 February 2015, accessed at: http://www.rfintelligence.com/_blog/RFi_Media_Centre/post/apple-reports-strong-us-apple-pay-rollout-numbers-no-word-on-australia/.

contributes to Apple's very strong bargaining position when negotiating in relation to Apple Pay exclusivity. The following paragraphs elaborate.

Differentiation between iOS devices and non-iOS devices

61. Smartphones differ in terms of their features, performance and design as well as customer perceptions of quality and brand value. iOS device owners, in particular, tend to be "sticky" when it comes to replacing or upgrading devices due in large part to emotional attachments to the Apple brand. Whereas Android device owners tend to select Android devices for affordability, iOS device owners tend to choose iOS devices for "status" and due to emotional attachments to Apple.[25]

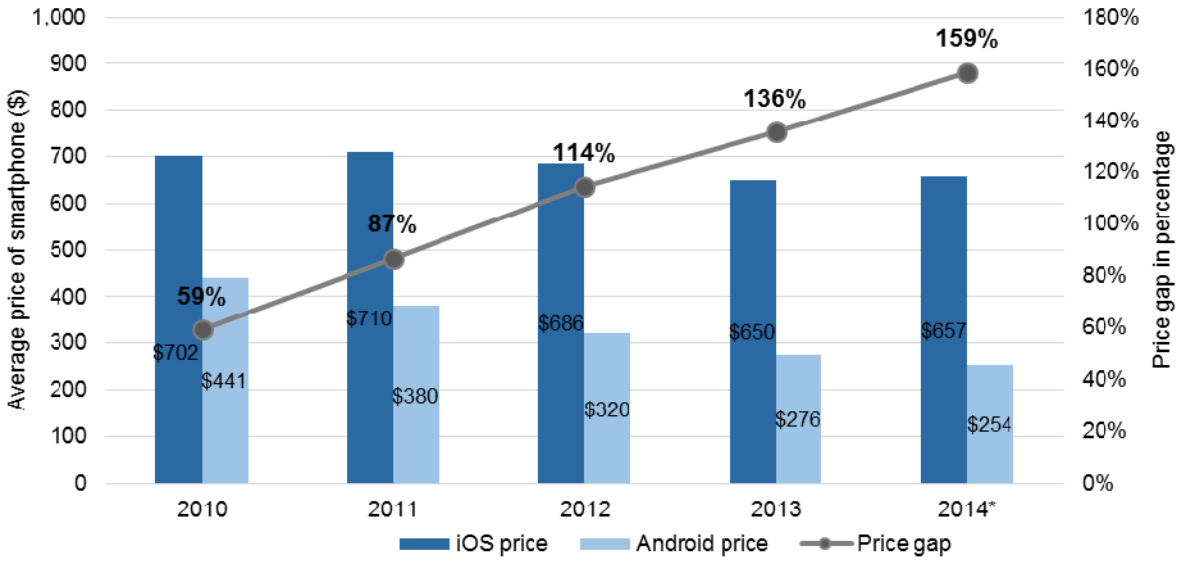
62. The significant differences between iOS and non-iOS devices and in how they are perceived by users are reflected in significant differences in retail prices. As shown in Figure 2 below, the price gap between iOS and Android smartphones is substantial and has been widening on a global scale, even though both types of smartphones are getting cheaper overall. Despite Apple's introduction of the slightly cheaper iPhone 5c in September 2013,[26] the worldwide average selling price of iPhones was more than twice as high as the average Android smartphone in 2013. After the introduction of the iPhone 6, the worldwide price gap for 2014 was estimated to have become even larger, with iPhones being on average 159% more expensive than Android phones. Given this large (and increasing) difference in price, it is not surprising that the iPhone is widely regarded as the "affluent consumer's device".[27]

25 Linda Federico-O'Murchu, "Why people pick Team Apple versus Team Android," *CNBC*, 19 January 2015, accessed at: http://www.cnbc.com/2015/01/19/why-people-pick-team-apple-versus-team-android.html.

26 iPhone 5c was introduced on 10 September 2013 and released 20 September 2013, https://www.apple.com/uk/pr/library/2013/09/10Apple-Introduces-iPhone-5c-The-Most-Colorful-iPhone-Yet.html

27 See for example 'NPD confirms it: Apple's iPhone is the affluent consumer's device in the US', Gigaom.com, 20 February 2014, https://gigaom.com/2014/02/20/npd-confirms-it-apples-iphone-is-the-affluent-consumers-device-in-the-us/, and 'What Kind Of Person Prefers An iPhone?', Forbes.com, 10 April 2014, http://www.forbes.com/sites/toddhixon/2014/04/10/what-kind-of-person-prefers-an-iphone/

Figure 2: Average selling price of iOS and Android smartphones worldwide, 2010-2014



Source: CRA based on Statista.com, http://www.statista.com/chart/1903/average-selling-price-of-android-and-ios-smartphones/ (accessed 20 September 2015)

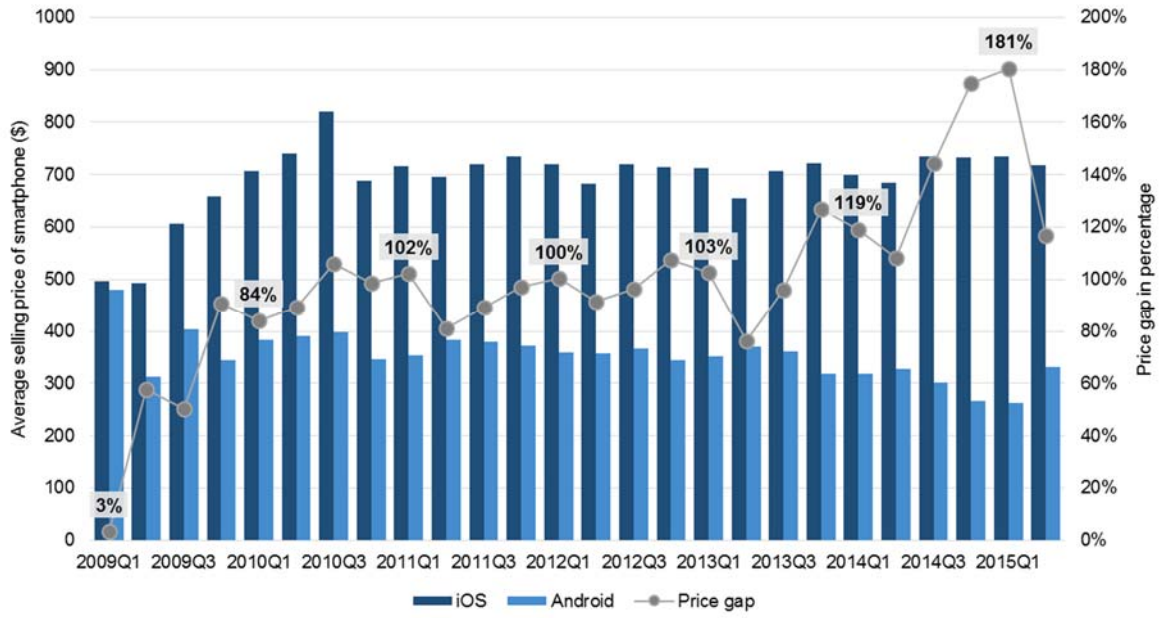
63. Data from IDC's worldwide quarterly mobile phone tracker shows a similar picture for the average selling price of iOS and Android smartphones in Europe. Figure 3 below shows that the average price gap has increased from only 3% in 2009 to 180% in early 2015; the difference has been more than 100% since the first quarter of 2013. The average price gap declined to 117% in the second quarter of 2015, which was presumably driven by the launch of the most expensive Android phone, the Samsung Galaxy S6, in April.[28] However, I expect the price differential to have increased back towards its previous level after the launch of the iPhone 6s and iPhone 6s in September 2015.[29] Although this data is for Europe, a similar picture can be expected in Australia.

28 The newest Samsung Galaxy model (S6) was released on 10 April 2015. See for example http://www.pcadvisor.co.uk/news/mobile-phone/samsung-galaxy-s6-uk-release-date-price-specs-new-features-cases-bundle-on-sale-blue-topaz-3531559/.

See e.g. https://www.o2.co.uk/shop/phones/?contractType=payasyougo#sort=content.sorting.highestOneoffCost for an overview of Samsung phone prices.

29 The new iPhone 6S was released on 25 September 2015, see for example http://www.techradar.com/news/phone-and-communications/mobile-phones/10-things-we-d-like-to-see-in-the-iphone-6s-and-iphone-7-1269122

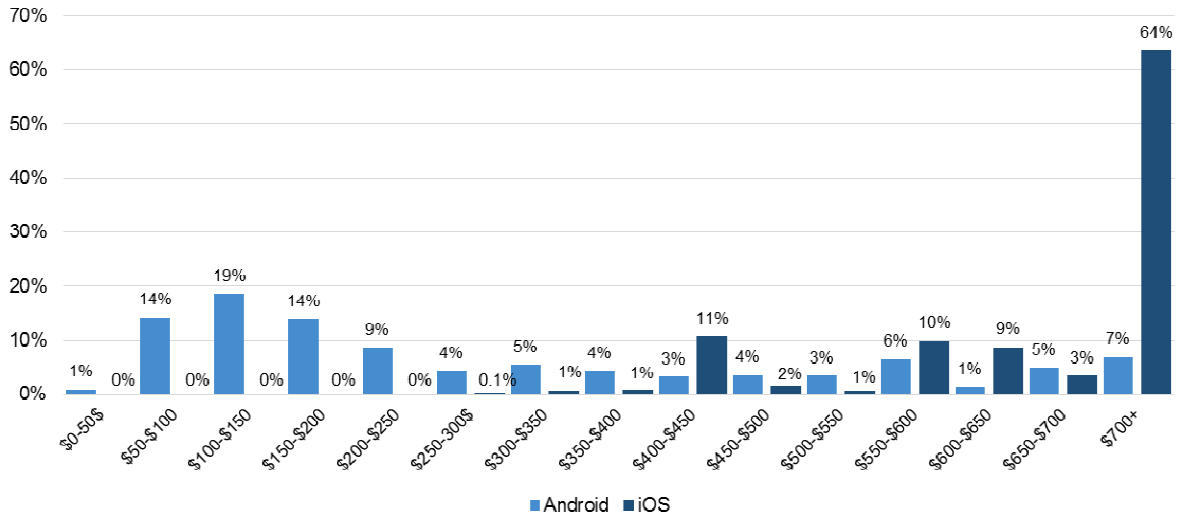
Figure 3: Average selling price of iOS and Android smartphones in Europe, 2009-2014



Source: CRA based on IDC WW Quarterly Mobile Phone Tracker, 2015Q2 Historical release, 7 August 2015

64. Moreover, as can be seen from Figure 4 below, most iOS smartphones sold in Europe (64%) are in the top price band of above US$700 whereas this price band accounts for only 7% of sales of Android devices. Again, a similar picture can be expected in Australia.

Figure 4: Shares of smartphones sold within price bands by operating system in Europe, 2014



Source: CRA based on IDC WW Quarterly Mobile Phone Tracker, 2015Q2 Historical release, 7 August 2015

65. Although there are Android models that are sold at similar price points as Apple devices (for example, the newest Samsung Galaxy S6 edge+, which is in the same price range as the iPhone 6 plus), sales of such models account for only a small proportion of total Android sales. The vast majority of Android phones are dramatically cheaper than iPhones. This reflects the dramatically different perceptions of value of these different devices.

66. Even for the Android devices that sell at similar price points, it is unlikely that many iOS device users view these as close substitutes. As mentioned, iOS users tend to have a strong preference for iOS devices and emotional attachments to the Apple brand and its design concepts.

67. According to research by Telsyte, iOS device users tend to keep buying iOS devices and Apple's user satisfaction is the highest among smartphone manufacturers.[30] According to Telsyte managing director Foad Fadaghi, "Apple users are unlikely to change their handsets and have even less reason to given the larger form factors and the better battery life on iPhones".[31] According to surveys by Kantar WorldPanel ComTech, 24% of Australian iOS buyers came from Android in the three months to September 2015, whereas only 13.5% of Australia Android buyers came from iOS in that period.[32] This demonstrates the loyalty that iOS device users tend to have in relation to Apple.

68. It should also be borne in mind that mobile payment functionality is only one relatively minor potential functionality of a mobile device. An iOS device consists of a combination of a large number of useful services: telephony, internet access, emails, calendar, address book, music player, video player, apps, games and many more. The core combination of these services is put together by Apple in a way that consumers value highly (including the physical design and the operating system). This in turn means that iOS device users tend to be loyal to their devices even if one out of the dozens of functionalities is not working perfectly. For this reason (together with the differentiation between iOS devices and non-iOS devices discussed above) it is unlikely that mobile payment functionality would be a major determinant of switching from iOS to non-iOS devices, except for at most a very small proportion of customers.

Significant switching costs

69. Mobile devices – particularly iOS devices – are also expensive, as demonstrated above, and even if iOS devices and non-iOS devices were close substitutes, having sunk an investment in one device, a consumer is highly unlikely to buy a new one just in order to make mobile payments. There are therefore significant switching costs for consumers that already own a device and are not at the point of needing or wanting to upgrade to a new one.

70. What is more, even when consumers may be considering purchasing a new device, and even if iOS and non-iOS devices were close substitutes, there are significant costs associated with switching between iOS and non-iOS eco-systems that represent significant barriers to switching. These switching costs limit the extent to which iOS based customers of an issuer would switch to a non-iOS device in order to be able to make integrated mobile payments.

71. Switching costs, or barriers to switching, arise for two main reasons. First, since modern mobile devices are relatively complex products combing a multitude of functionalities, consumers gain significant familiarity and experience with handling the particular operating

30 Chris Griffith, "Smartphone vendors face saturated market," *The Australian*, 31 March 2015, accessed at: http://www.theaustralian.com.au/life/personal-technology/smartphone-vendors-face-saturated-market/story-e6frgazf-1227285151974.

31 Above note 30.

32 Email from Carolina Milanesi, Chief of Research and Head of US Business, Kantar WorldPanel ComTech.

system they use and comfortableness with its functions. Switching to a device with a different operating system would require users to learn and become familiar with a new user interface – an inconvenience that many consumers try to avoid.

72. Second, since mobile devices are the access points to a consumer's digital life (including favourite apps, photo, music and film libraries, texts, calendar and address book entries and a multitude of personal files), switching is typically viewed as cumbersome, since it requires transferring a large amount of data through often inconvenient and imperfect mechanisms. Migrating contacts can be a straightforward process when the consumer follows a detailed guideline, and photos and videos can be transferred using specific data-transferring apps.[33] However, even then significant transaction costs are involved, which many consumers prefer to avoid. A number of other items cannot be transferred at all, or only with great difficulty:

    a. iOS apps cannot be transferred – apps that were purchased for iOS devices would have to be purchased again for a non-iOS device (at additional cost if the apps are not free) after a switch to a non-iOS device, and not all iOS apps are available for other platforms;

    b. Text messages are not easy to transfer and will likely require premium software options to do so; and

    c. Accessories such as cases, docks, cables and chargers might not be compatible with a non-iOS device.

73. Moreover, some apps also store data directly on the phone instead of storing the data externally in a cloud. When migrating to a non-iOS device, such app data would be lost, even if there are equivalent Android or Windows versions of the respective apps that can be purchased.

Summary

74. Given the limited substitutability of iOS and non-iOS devices and the switching costs just discussed, the hypothetical outside option for issuers of persuading iOS device users to switch to non-iOS devices does not exist. At the same time, the consequences for Apple of not reaching deals with an individual issuer are limited to the failure to generate revenues from Apple Pay in relation to the cards of that issuer, and do not extend to losing many device customers to Android or other non-iOS devices. This contributes to Apple's very strong bargaining position in relation to exclusivity for Apple Pay (i.e. because its cost of a breakdown of negotiations is low, whereas the benefit of successfully imposing exclusivity, including the ability to earn monopoly revenues from Apple Pay fees, is high).

4.2.3. Competition between issuers

75. At the same time, issuers provide largely homogenous services to customers and, particularly for credit cards, there are low barriers to customers switching from one issuer to another. Payment convenience is likely to be a matter of some importance to customers, and issuers that offer increased payment convenience are likely to be more effective at attracting and retaining customers in relation to personal current accounts, credit card accounts and debit and credit card payments. This is particularly likely to be the case in

33 For example, see https://www.android.com/switch/.

relation to iOS device users, who tend to value simplicity and convenience and new technologies, and tend to consider themselves "addicted" to their mobile devices.[34] iOS device users are therefore likely to look favourably on issuers that can offer integrated mobile wallet functionality (and unfavourably on those that cannot).

76. In this context, Apple has the potential to play one issuer off against the others (thereby increasing the costs to each individual issuer of failing to reach a deal with Apple) as the issuers are in competition for banking customers.[35] As mentioned, this dynamic appears to be taking place already.[36]

77. By contrast, if there was limited or no competition between issuers – for example, if there was only a single Australian issuer – there would be a greater likelihood that the outcome would be a waiver or at least some relaxation of Apple's policy of exclusivity. In that situation, if negotiations were to fail, the issuer would not fear significant loss of customers to other issuers and would not feel compelled to reach an agreement with Apple for that reason.

4.2.4. Summary

78. As discussed above, iOS device users are a particularly important segment of bank customers (both in terms of the size of the segment and the characteristics of iOS device users as wealthy and frequent transactors), have a propensity to adopt mobile payments, and also have a propensity to switch between issuers depending on which issuers offer them the ability to make integrated mobile payments with their iOS devices. As a result of all this, to be included within Apple Pay is likely to become very important for each issuer from a competitiveness perspective.

79. At the same time, the bargaining position of individual issuers is weakened and Apple's bargaining position is strengthened by the fact that iOS device users are "sticky" to Apple (i.e. there is an extremely low likelihood that they would switch to non-iOS devices in order to be able to make mobile payments). This is because non-iOS devices are not close substitutes and, in any event, there are significant switching costs. This means that issuers lack any outside option of persuading customers that have a preference for making integrated mobile payments to switch to non-iOS devices.

80. Finally, the bargaining position of individual issuers is further weakened and Apple's bargaining power is further strengthened by the fact that each individual issuer faces competition from other issuers, and without an agreement with Apple an issuer would be at

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34 Todd Hixon, "What Kind of Person Prefers an iPhone," Forbes, 10 April 2014, accessed at: http://www.forbes.com/sites/toddhixon/2014/04/10/what-kind-of-person-prefers-an-iphone/.

35 Indeed, it has been reported in the media that of one of the big four banks has contemplated reaching an agreement with Apple in order to gain an advantage over competitors in relation to the affluent early adopter customer segment: see Luke Hopewell, "Would You Change Banks for Apple Pay in Australia?," *Gizmodo*, 17 August 2015, accessed at: http://www.gizmodo.com.au/2015/08/would-you-change-banks-for-apple-pay-in-australia/, and James Eyers, "$2b fee sticking point as Apple wrangles with Australia's big four banks," *Australian Financial Review*, 17 August 2015, accessed at: http://www.afr.com/technology/apple-pay-being-repelled-b-big-banks-20150815-gizz6y.

36 See James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

a significant competitive disadvantage when trying to attract and retain customers with strong preferences for making integrated mobile payments. An issuer that does not reach an agreement with Apple will stand out as the one issuer for which iOS device users cannot make integrated mobile payments. Apple is therefore able to "play off" each issuer against the others, and has demonstrated in Australia as well as in other countries that it is aware of this ability by its insistence on secrecy in negotiations (so that issuers are unaware of what others are doing).[37]

81. These factors together create a likelihood that issuers in individual negotiations with Apple will face payoffs that reflect Prisoners' Dilemma payoffs and will accept Apple's exclusivity. In the language of game theory, issuers are likely to find that they have a dominant strategy to accept exclusivity, because they will obtain a significant competitive advantage if other issuers do not, and they will avoid being at a significant competitive disadvantage if other issuers do.

82. Note that the Prisoner's Dilemma arises due to the lack of substitutability that Apple faces while, on the other side of the negotiations, there is competition between issuers, which makes it important for any individual issuer to offer the ability to make integrated mobile payments on iOS devices. Competition between issuers therefore weakens individual issuers' bargaining positions vis-à-vis Apple, which itself faces very few constraints as its customers are "sticky". Apple's negotiation leverage prevails even though Apple needs agreements with issuers for Apple Pay to be a success. It is the asymmetric competitive intensity facing Apple on the one hand (from non-iOS devices) and the issuers on the other that makes it likely that Apple will impose what is ultimately (as I explain below) an uncompetitive outcome in the form of full exclusion of competing integrated mobile wallets on iOS devices.

83. The Annex to this report contains a simple heuristic illustration of the Prisoners' Dilemma payoffs that may exist in the context of issuers' negotiations with Apple over exclusivity.

4.3. The likely counterfactual in the absence of collective negotiation

84. If all issuer payoffs reflect the Prisoners' Dilemma payoffs, the equilibrium in the absence of collective negotiation will be one in which all issuers reach agreements with Apple that accept that Apple Pay will be the exclusive mobile wallet on iOS devices. In this equilibrium, Apple Pay would be the only method by which iOS device users could make mobile payments.[38] The path towards this equilibrium appears to have begun, with ANZ recently joining Apple Pay, and pressure increasing on other issuers to do likewise.[39]

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37 See above note 13.

38 Note that it is likely that exclusivity would extend to precluding issuers from offering non-integrated mobile payments via NFC stickers on iOS devices. As there is no way to turn off an NFC sticker, attempts to pay using Apple Pay would be likely to suffer from interference and unpredictable results ("card clash") as the merchant terminal would try to read from both NFC chips. Since Apple insists on exclusivity so that it can control payments made using iOS devices, it seems unlikely that Apple would allow such a workaround, particularly as it may lead to a degradation in performance of Apple Pay and card and customer confusion.

39 See James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

85. I expect the likely counterfactual from this point onward to be one in which, initially, some of the applicants follow ANZ in reaching agreements with Apple including exclusivity for Apple Pay, seeking thereby to gain a competitive advantage (or to neutralise a potential competitive disadvantage), while others may "hold out" for a while, due to perhaps wanting to continue to try to seek a waiver or relaxation of exclusivity, or because they are reluctant to embrace a third party mobile wallet solution that places Apple at the centre of customers' payment experiences and in which Apple will charge (potentially large) fees for the privilege. However, I expect that over time, as mobile payments become more prevalent and then commonplace, and as more issuers join Apple Pay, and given the importance of iOS device users as customers, the increasing competitive disadvantage faced by issuers without agreements with Apple will ultimately persuade all of the applicants to reach agreements with Apple that accept exclusivity for Apple Pay. This has been the experience in the UK,[40] which is similar to Australia in having a large segment of iOS device users and a large network of merchant terminals ready to accept contactless payments via NFC chips, meaning that the situation in the UK (as it is in Australia) is ripe for iOS device users to quickly move from physical card payments to mobile payments.

5. THE LIKELY OUTCOME IF COLLECTIVE NEGOTIATION IS AUTHORISED

86. For the reasons explained above, if collective negotiation is not allowed, there is a significant risk that Apple will be able to "divide and conquer", such that Apple Pay will be the only integrated mobile wallet available to users of iOS devices in Australia. Currently only American Express and ANZ have reached agreements with Apple that (I assume) accept exclusivity for Apple Pay, but in the counterfactual it is likely that, eventually, all of the applicants will also reach agreements with Apple that accept exclusivity for Apple Pay, due to the consequences for their competitive positions if they "hold out", particularly as mobile payments become more commonplace and given the importance of iOS device users for issuers.

87. To assess the benefits and detriments of collective negotiation with Apple with respect to exclusivity, it is necessary to compare the likely counterfactual against the likely outcome if collective negotiation is authorised.

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40 According to an article in Macstories, getting banks in the UK to support Apple Pay was problematic, and Apple Pay launched in the UK in July 2015 with the support of eight banks, but only one of the "big four" banks. However, in time all but one of the major banks joined and the last remaining major bank, Barclays, is expected to join soon. See Graham Spencer, "The State of Apple Pay," *Macstories*, 9 October 2015, accessed at: https://www.macstories.net/stories/the-state-of-apple-pay/. See also David Price, "Apple Pay UK launch guide | Barclays won't offer Apple Pay until 'early 2016' | Tesco, TSB join Apple Pay | Apple Pay launches in Canada, Australia," *Macworld*, 23 November 2015, accessed at: http://www.macworld.co.uk/news/apple/complete-guide-apple-pay-when-will-apple-pay-launch-in-uk-release-date-halifax-lloyds-3544309/, which includes a discussion of the delay in Barclays joining Apple Pay. Barclays has stated that it will support Apple Pay "in the future": see "Apple Pay's UK Debut Hits and Misses," *pymnts.com*, 15 July 2015, accessed at: http://www.pymnts.com/news/2015/apple-pays-uk-debut-hits-and-misses/. See also Carly Page, "Apple Pay now available for TSB and Tesco Bank customers," *the Inquirer*, 17 November 2015, accessed at http://www.theinquirer.net/inquirer/news/2417397/apple-pay-barclays-to-offer-imminent-support-for-iphone-payments-service and Joe Minihane, Barclays Apple Pay launch now set for 2016," *uSwitch*, 8 October 2015, accessed at http://www.uswitch.com/mobiles/news/2015/10/barclays_apple_pay_launch_now_set_for_2016/.

88. Collective negotiation in relation to exclusivity has the potential to overcome the Prisoners' Dilemma that the applicants otherwise face (by denying Apple the ability to play each applicant off against each other), strengthen their bargaining position, and thereby increase the likelihood that Apple will agree to waive or relax Apple Pay exclusivity in some way (e.g. by agreeing to a time limit on the exclusivity or that the exclusivity be limited to other third party wallet providers, allowing for issuer proprietary integrated mobile wallets on iOS devices).[41] If this were to occur, it would mean that the applicants would be able to launch proprietary integrated mobile wallets on iOS devices (either immediately or at the expiry of a period of exclusivity) and consumers would have a choice of integrated mobile wallets on iOS devices. As discussed below, this is likely to bring net public benefits and net benefits in particular for consumers.

89. For this to occur, and for the likely net benefits to be realised, a collective boycott of individual negotiations would be necessary in parallel with the collective negotiation. Without a parallel collective boycott, the applicants would be free to negotiate individually with Apple, with the result that the bargaining positions of the parties would be unchanged from the counterfactual (denying the potential public benefits of collective negotiation). To put this another way, the strength of each sides' bargaining position depends on their outside options. The bargaining position of the applicants relative to Apple will only be improved if it is understood that Apple must either deal with all of the applicants together, or not at all. By negotiating only on a collective basis with Apple, the applicants can deny Apple the ability to play each applicant off against each other based on the Prisoners' Dilemma payoffs. However, if a parallel collective boycott were not authorised, Apple would retain an outside option of individual negotiations, and the potential improvement in bargaining positions offered by collective negotiation would be undone.

90. An alternative possible outcome of collective negotiation may be that the collective negotiations reach a stalemate and do not allow for agreements between Apple and the applicants in relation to integrated mobile wallets on iOS devices including Apple Pay. This would mean that Apple Pay would be limited in Australia to cards issued by American Express, ANZ and other non-applicant issuers. While this is a possible outcome, it seems more likely that agreements will ultimately be reached between Apple and the applicants, either through collective negotiations, or, subsequently, individual negotiations between the applicants and Apple. There will be considerable pressure on both Apple and the applicants to conclude negotiations successfully, as both will experience customer

41 Although just three of the four major Australian banks are applicants for authorisation, and ANZ has already reached an agreement with Apple (increasing the pressure on the applicants to also reach agreements), I understand that the applicants still believe that collective negotiation has the potential to produce an agreement with Apple that will include pro-competitive compromises by Apple on exclusivity, pass-through and security standards.

There is clearly a question whether Apple would waive exclusivity altogether, even when faced with collective negotiation by a group of Australian issuers, due to the precedent that this might set for Apple's negotiations with issuers in other countries. It seems more plausible that collective negotiation may persuade Apple to agree to some relaxation of exclusivity, such as agreeing to a time limit on exclusivity or that the exclusivity be limited to other third party mobile wallet providers, but allow issuers to offer their own proprietary mobile wallets on iOS devices.

dissatisfaction and reputational damage if they do not,[42] and the applicants in particular will experience a loss of customers to issuers that have reached agreements with Apple, such as ANZ: this is likely to place further pressure on them to accept Apple's terms.[43]

6. PUBLIC BENEFITS OF COLLECTIVE NEGOTIATION IN RELATION TO EXCLUSIVITY

91. The public benefits discussed in this section assume that collective negotiation would result in a greater likelihood (compared to the counterfactual) that Apple Pay's exclusivity in relation to iOS devices will be waived or relaxed in some way so as to allow at least issuer proprietary integrated mobile wallets to operate on iOS devices in parallel with Apple Pay. As discussed above, I consider the most likely counterfactual in the absence of collective negotiation to be one in which Apple Pay is the only integrated mobile wallet on iOS devices.

6.1. Greater choice for iOS device users

92. Perhaps the most obvious potential benefit from collective negotiation is the greater potential for iOS device users to have choice, when making mobile payments, between a number of alternative integrated mobile wallets (rather than Apple Pay alone).

93. As discussed above in Section 2.3, mobile wallets are likely to be highly differentiated (in terms of functionality, services offered, security, loyalty points and discounts, etc.), and a choice between two or more is likely to result in a better matching of consumer preferences and greater consumer utility than if there is only one. For example, one consumer may prefer the ability within Apple Pay to manage and choose between multiple cards from multiple issuers, while another may prefer to be more engaged with their primary issuer, and value the ability to manage payments within the same application that they use to manage their accounts, check balances and credit limits, and make transfers between accounts. A third consumer may value the ability to choose between Apple Pay and their primary issuer's mobile wallet on a transaction by transaction basis, depending, for example, on inducements such as loyalty points that may be associated with the combination of a particular retailer and a particular mobile wallet, or on whether, for a particular transaction, the consumer wishes to simultaneously access other mobile banking services (e.g. account balances) that may only be available within the issuer's mobile wallet.

94. According to Accenture, the services consumers most look for from their mobile wallets, in addition to payment functionality, are the ability to track receipts, manage their personal

42 See, for example: David Glance, "Apple Pay in Australia: Customers lose out and all parties share the blame," *The Conversation*, 30 November 2015, accessed at: https://theconversation.com/apple-pay-in-australia-customers-lose-out-and-all-parties-share-the-blame-51438.

43 Again, see James Ayres, "Apple Pay deal could deliver accounts to ANZ Bank," *Sydney Morning Herald*, 29 April 2016, accessed at: http://www.smh.com.au/business/banking-and-finance/apple-pay-deal-could-deliver-accounts-to-anz-bank-20160428-goh9qy.html.

finances as part of the payment experience and hold their driver's license in digital form.[44] Issuer proprietary mobile wallets offer the potential to deliver some of these requirements (e.g. managing finances in real time) where third party mobile wallets such as Apple Pay do not. Allowing integrated issuer proprietary mobile wallets on iOS devices would therefore be likely to enhance the matching of consumer preferences for mobile wallets.

6.2. Greater migration of payments from cash and physical card payments to mobile payments

95. Generally, the more choices that customers have and the better their preferences are met, the more likely they will become familiar and comfortable with and adopt mobile payments. Moreover, given the difficulties of persuading Australian consumers to adopt mobile payments, which include perceptions around (lack of) security and a lack of clarity around the benefits of mobile payments compared to widely used contactless card payments, in order to stimulate migration it will be important not to limit the range of alternative mobile wallet solutions that may develop.

96. It is interesting that, in insisting on exclusivity for Apple Pay, Apple is playing against its own rulebook for igniting the adoption of new technologies. One of the keys to the success of Apple's iPhone and iPad (since the second generation iPhone was launched in 2008) has been its open platform to third party developers. This has led to the development of thousands of applications with functions and features that greatly enhance the value of iOS devices and, at the same time, the adoption by consumers of new technologies such as mobile social media (Twitter), web messaging (WhatsApp) and video calling (Tango, Skype), to name a few. No single company on its own would have been capable of developing this array of applications, nor the choice among similar applications that ultimately leads to the survival of the fittest. A good example is messaging: without WhatsApp (a third party app independent of Apple, which now has its own messaging app called iMessage), it is unlikely that web messaging would have become as widely adopted and used as it has. Similarly, Skype has boosted adoption of video calling beyond the level of adoption that would have occurred with Apple's FaceTime alone. Together innovative apps and the "fittest" apps (a combination of Apple's own apps and third party apps) have made a significant contribution to the success of Apple's mobile devices.

97. Apple has typically opened up access not only to the iOS software, but also the hardware in the devices. For example, iOS device users can choose between multiple alternative torch apps (making use of the camera flash hardware) and multiple alternative compass apps making use of the integrated compass sensor. Apple does not insist on exclusivity in relation to these elements of the hardware of iOS devices, even though it may have its own app making use of that hardware (e.g. FaceTime for video calling and Apple's own Compass app). As a result, iOS device users have been able to weed out the good hardware dependent apps from the bad, choosing alternatives to the Apple app where those alternatives are superior or match their preferences better. This has again ultimately benefitted Apple: by maximising the utility of complementary apps, it has maximized the value of its iOS devices.

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44 Accenture, *Digital Payments Transformation: From transactions to consumer interactions*, 2013, page 10, accessed at: https://www.accenture.com/t20150707T195226__w__/us-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Industries_5/Accenture-Digital-Payments-Transformation-From-Transaction-Interaction.pdf.

98. However, by insisting on exclusivity in relation to the NFC hardware for making mobile payments, Apple is diverting from this script, and precluding the possibility of iOS device users choosing – from among a wide variety of potential mobile wallets with integrated mobile payment functionalities – those that work best or suit each user the best. This is likely to limit the full potential of mobile wallet and mobile payment adoption, just as exclusivity in relation to messaging or in relation to the video hardware would have limited the full potential of messaging and video calling, respectively.[45]

99. Trust is another important reason why adoption of mobile payments is likely to be more rapid and extensive if issuer proprietary integrated mobile wallets are on iOS devices. Surveys show that customers are concerned about the security of payments generally and mobile payments in particular.

    a. According to the ABC, an RFi survey in 2014 reported that 55% of respondents cited security as one of the top three factors that influence their choice of payment method with 29% citing it as the most important factor.[46]

    b. More recently RFi has reported that 49% of respondents to a survey cited security concerns when asked what they found unappealing about digital wallets.[47]

    c. A 2015 Deloitte survey suggests that only 24% of Australian respondents indicated that they would use their smartphone like a debit/credit card (a 16 percentage point decline on 2014 and significantly less than the global average), and one of the main reasons cited for this (by 43%) was a perceived lack of security.[48] This echoes an earlier similar finding from a 2013 Accenture survey of US consumers: over 45% reported that they were not using their smartphone for mobile payments due to concerns around security.[49]

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45 An obvious question here is: if open access ultimately benefits Apple by enhancing the prospects of innovation and allowing for greater choice and quality of apps on iOS devices, why does Apple seek to restrict access to the NFC hardware? The answer, explained below (see Section 6.4), is that although allowing for competing integrated mobile wallets would likely lead to faster and greater adoption of mobile payments, and greater customer satisfaction with the mobile payment functionality on iOS devices, Apple presumably anticipates that by insisting on exclusivity for Apple Pay it will be able to earn a significant revenue stream through the fees that it will charge issuers.

46 Kenji Nishi, "Banking on innovation: Driving mobile payments development," *ABC*, 17 June 2014, accessed at: http://www.abc.net.au/technology/articles/2014/06/17/4026994.htm.

47 Alan Shields, "Mobile payments: an Apple with Bananas comparison," *RFi Group*, Media Release, 4 March 2015, accessed at: http://www.rfintelligence.com/_blog/RFi_Media_Centre/post/mobile-payments-an-apple-with-bananas-comparison/.

48 Deloitte, *Mobile Consumer Survey 2015 – The Australian Cut*, page 44, accessed at: http://landing.deloitte.com.au/rs/761-IBL-328/images/deloitte-au-tmt-mobile-consumer-survey-2015-291015.pdf?mkt_tok=3RkMMJWWfF9wsRokvaTLcu%2FhmjTEU5z16O4sWK%2Bzi4kz2EFye%2BLIHETpodcMT8RlPbvYDBceEJhqyQJxPr3CKtEN09dxRhLgAA%3D%3D.

49 Accenture, *Digital Payments Transformation: From transactions to consumer interactions*, 2013, page 10, accessed at: https://www.accenture.com/t20150707T195226__w__/us-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Industries_5/Accenture-Digital-Payments-Transformation-From-Transaction-Interaction.pdf.

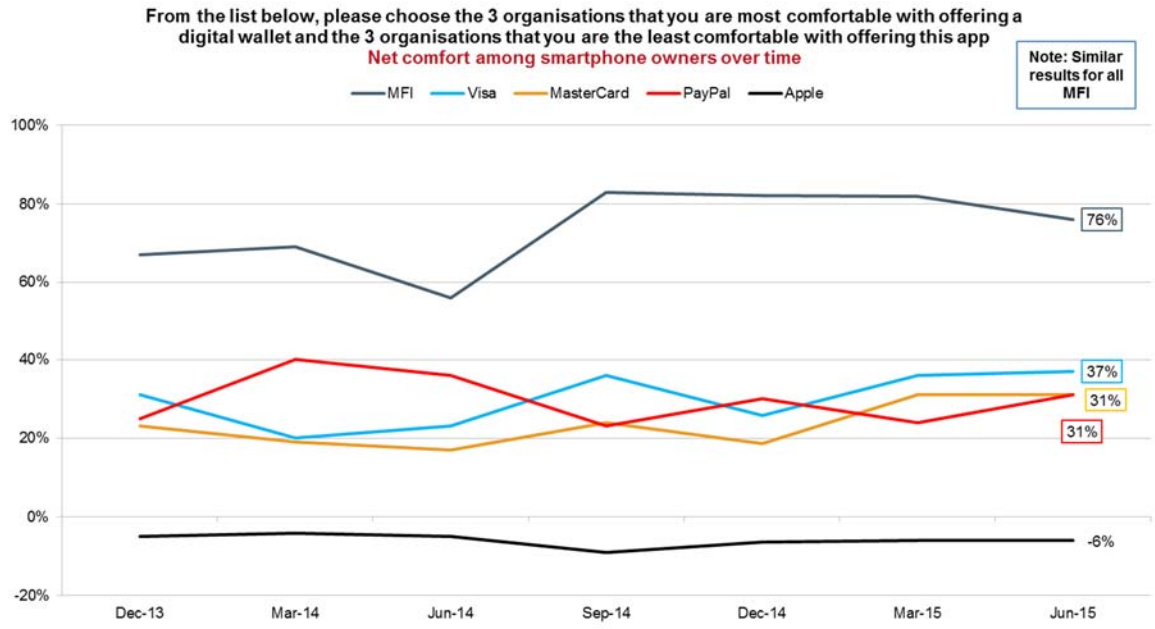
100. A significant barrier to widespread adoption of mobile payments is therefore overcoming consumers' inherent distrust of mobile payments as a new payment method and their perception (right or wrong) of security issues with mobile payments. As Deloitte concludes:

> *[t]o overcome what appears to be a declining interest in making payments using your [sic] smartphone for day to day transactions […] financial institutions, retailers and app savvy developers will need to look beyond just the payment process. Designing a compelling value proposition for mobile consumers that uses the full functionality and emphasises the security features of the smartphone will be key.*[50]

101. Accenture similarly concludes: "[k]ey to changing these concerns is to address not only security technology but also the perception that paying with a mobile is secure". As this quote highlights, in order to speed up the migration to mobile payments it is not going to be sufficient for mobile wallets to offer high levels of *actual* security. What will be needed are ways to address and overcome customer *perceptions* of security issues with mobile payments.

102. Issuer proprietary mobile wallets are likely to be important for this. It is clear from survey evidence that consumers are more likely to trust mobile wallets provided by their issuers than those offered by tech companies. As shown in Figure 5 below, survey research by RFi indicates that consumers are considerably more comfortable with their main financial institution providing them with a mobile wallet than Apple doing so.

Figure 5: Comfort with mobile wallet providers (RFi survey results)

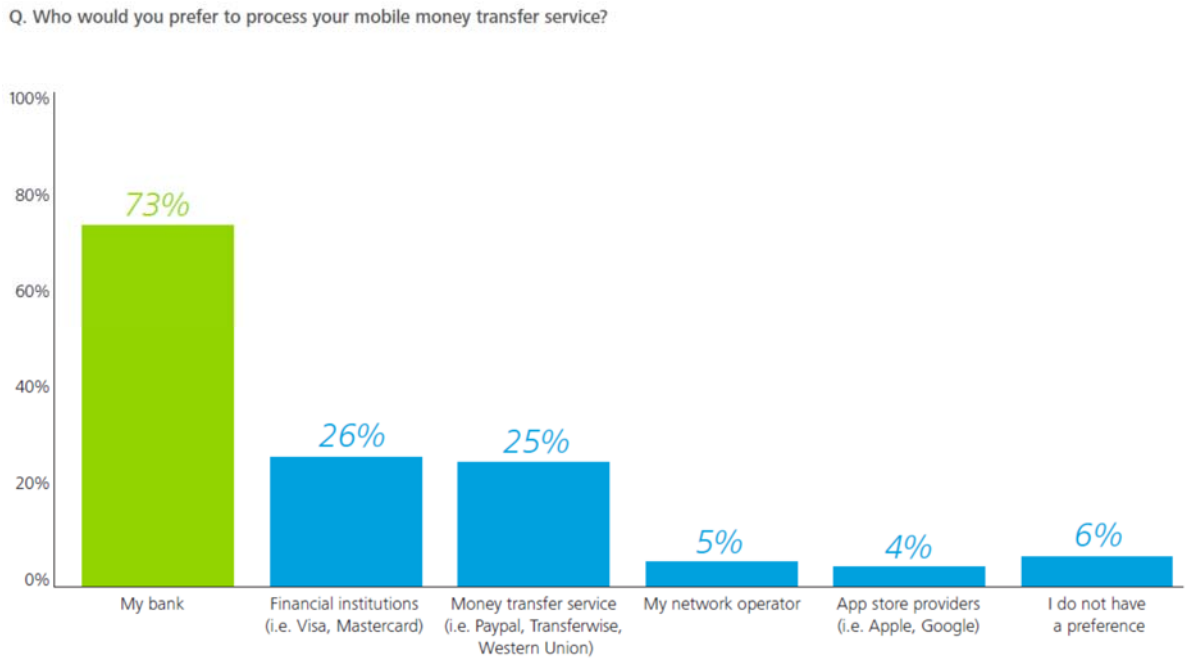


RFi, *Australian Digital Banking Program*, June 2015 survey results for CBA

50 Deloitte, *Mobile Consumer Survey 2015 – The Australian Cut*, page 45, accessed at: http://landing.deloitte.com.au/rs/761-IBL-328/images/deloitte-au-tmt-mobile-consumer-survey-2015-291015.pdf?mkt_tok=3RkMMJWWfF9wsRokvaTLcu%2FhmjTEU5z16O4sWK%2Bzi4kz2EFye%2BLIHETpodcMT8RlPbvYDBceEJhqyQJxPr3CKtEN09dxRhLgAA%3D%3D.

103. This finding is echoed in Figure 6 below, which reports results from a Deloitte survey of Australian consumers. According to this survey, 73% would prefer their bank to process their mobile money transfer service and only 4% a player such as Apple or Google.

Figure 6: Who do you trust with your money on mobile (Deloitte survey results)



Source: Deloitte's Mobile Consumer Survey 2014: The Australian Cut, page 42

104. The reported high rate of fraud associated with Apple Pay soon after its launch in the United States, which has been attributed to insufficiently secure "on-boarding" of card details in the identification and verification process, may have been at least partly a result of the incentives that a third party mobile wallet provider such as Apple has to make the on-boarding process as seamless for the user as possible.[51] Issuer proprietary mobile wallets are less likely to suffer such fraud rates given that the issuer ultimately bears the cost of fraud. These differing incentives suggest that mobile wallets provided by issuers may have a tendency to offer customers greater security, or at least the *perception* of greater security, which is key to adoption of the technology.

105. The concerns regarding fraud and security with mobile payments echo concerns held in relation to online payments. In reporting on a 2010 study, the RBA stated that:

> *By far the biggest deterrent to making any type of payment online is the risk of fraud. This concern is higher for online purchases than for bill payments and transfers, again possibly reflecting the fact that consumers tend to feel most secure making payments online when they can be made through their financial institution's*

51 See Section 9 below for further discussion of Apple Pay fraud.

> *internet-banking site, although the degree of trust in the payee might also be a factor.*[52]

106. All this means that, for mobile wallet adoption to be rapid and widespread (and for migration of payments to what may in many cases be a more efficient or convenient payment method for consumers), it is likely to be important that issuer proprietary integrated mobile wallets are able to be offered alongside third party integrated mobile wallets like Apple Pay. Apple Pay on its own may struggle to overcome initial consumer perceptions of security issues with the new method of payment, as Apple as a company does not appear yet to have consumers' trust regarding payments.

107. To be clear, my argument here is not that issuer proprietary mobile wallets should take precedence over Apple Pay on iOS devices, but that there would be benefits from the possibility for *all types* of mobile wallets to operate on iOS devices.

6.3. Greater competition leading to lower prices and higher quality

108. Another obvious benefit from collective negotiation would be an increased likelihood of competition between integrated mobile wallets on iOS devices. If issuers accept Apple's exclusivity in relation to Apple Pay, they are essentially agreeing not to vertically integrate and not to compete with Apple in relation to the supply of integrated mobile wallets on iOS devices. To the extent that collective negotiation may change bargaining positions, such that issuers are more likely to achieve a full waiver or some relaxation of Apple's exclusivity, this has the prospect of facilitating greater competition among mobile wallets. Such competition can be expected to generate direct benefits for consumers in terms of both prices and quality.

6.3.1. Lower prices

109. Although consumers may not pay fees directly for using mobile wallets to make payments (unless the mobile wallet provider's charges are passed through), there is nonetheless likely to be a "price" that mobile wallet users face, which is likely to be lower if competition is allowed. For example, using a particular mobile wallet may require the consumer to accept advertising or other marketing or promotional efforts, or it may require the consumer to forego loyalty points or discounts that may be available with another mobile wallet.

110. Competition between integrated mobile wallets on iOS devices is likely to result in customers with iOS devices enjoying lower "priced" mobile wallets, as integrated mobile wallet providers compete to be the preferred wallet for mobile payments by those customers. A reduction or elimination of advertising or other inconveniences that consumers may experience in order to use a mobile wallet, and the offering of loyalty points, discounts on purchases or other financial incentives, are all equivalent to offering customers lower prices to use a particular mobile wallet.

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52 Reserve Bank of Australia, *Strategic Review of Innovation in the Payments System: Results of the Reserve Bank of Australia's 2010 Consumer Payments Use Study*, June 2011, Section 5, accessed at: http://www.rba.gov.au/publications/consultations/201106-strategic-review-innovation/results/online-newer-payment-methods.html.

111. Customer incentives are likely to be a main driver of mobile wallet adoption and competition.[53] For example, Samsung Pay, which is exposed to competition from other mobile wallets on Samsung devices, is promoting adoption in the US by offering customers US$100 off any Samsung.com purchase if a consumer activates Samsung Pay with a valid card.[54] According to research commissioned by CBA, large proportions of respondents cited loyalty schemes and redeeming coupons as features they expect of mobile wallets in the future.[55]

6.3.2. Better quality

112. Rivalry between mobile wallet providers to attract usage by consumers is also likely to drive improvements in the quality of mobile wallets, whether in terms of the seamlessness of the payment experience, the frequency of updates, the security of transactions and the consumer's personal information, extra functionalities offered by the mobile wallet such as greater information provided in real-time regarding payments, the ability to withdraw money from ATMs, better customer service or other dimensions. All such developments will benefit consumers and will spur other mobile wallet providers to improve the quality of their offerings.

6.3.3. Summary

113. For the reasons discussed above, if Apple is able to maintain exclusivity for Apple Pay on iOS devices, Apple will not be constrained by rival integrated mobile wallets and it can be expected that mobile wallet users on iOS devices will experience higher prices and lower quality than if competition between integrated mobile wallets on iOS devices were able to develop.

114. It is worth noting here that if Apple maintains exclusivity, it will not only not be constrained directly by rival integrated mobile wallets on iOS devices, but also, it will not be constrained indirectly at the device level by rival devices using Android or other operating systems. As explained earlier, there is limited substitutability between iOS and non-iOS devices, and even if these were close substitutes, it is highly unlikely that a sufficiently significant proportion of iOS device owners would switch to non-iOS devices to constrain an increase in price or a reduction in quality of Apple Pay, because a mobile wallet such as Apple Pay represents only one aspect of the overall iOS device experience.

6.4. Reduction in fees charged by Apple

115. As mentioned earlier, Apple's business model involves charging fees to issuers for payments made using Apple Pay (where the fees are a percentage of transaction value).

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53 See, for example, Karen Webster, "Apple Pay and Mobile Payments' Secret Weapon," *pymnts.com*, 29 September 2015, accessed at: http://www.pymnts.com/news/2014/apple-pay-and-mobile-payments-secret-weapon/. See also "The Long Road to Mobile Adoption," *pymnts.com*, 17 November 2015, accessed at: http://www.pymnts.com/news/2015/the-long-road-to-mobile-adoption/.

54 *Samsung Pays New Samsung Pay Shoppers*, pymnts.com, accessed at http://www.pymnts.com/news/2015/samsung-pays-new-samsung-pay-shoppers/.

55 CBA, *Commbank Reveals Mobile Wallet Tipping Point*, CBA Media Release, 21 March 2014, accessed at: https://www.commbank.com.au/about-us/news/media-releases/2014/commbank-reveals-mobile-wallet-tipping-point.html.

By contrast, when customers use a proprietary mobile wallet of their issuer there are no such additional fees.

116. In a competitive banking market it is likely that, to at least some extent, Apple's fees will be passed through to final consumers, as issuers look to recover the costs. Apple insists not only on exclusivity, but also on restrictions on pass-through that might otherwise inform customers of the additional costs of using Apple Pay compared to using other payment methods such as cash or physical cards. Even if Apple did not insist on restrictions on pass-through, issuers may be reluctant to impose charges on customers to reasonably reflect Apple's fees due to the unpopularity of such charges and the importance to issuers of iOS device users as a customer segment (discussed earlier).

117. Competition between integrated mobile wallet providers on iOS devices would be likely to constrain the fees that Apple seeks to charge. If Apple Pay exclusivity is waived or relaxed, and if Apple charges a fee of, say, 0.1% for each Apple Pay transaction, issuers will have incentives to offer customers inducements of up to 0.1% of the value of the transaction to use the issuer's proprietary mobile wallet instead of Apple Pay. These inducements could be in the form of loyalty schemes, discounts or even direct credits/cashback to the customer's account. The mere *possibility* of such inducements would itself constrain the fees that Apple would wish to charge for the use of Apple Pay: Apple would know that if it were to set high fees, this would likely generate efforts by issuers to induce customers to switch away from Apple Pay. Also, if Apple were to set high fees and issuers were to offer such inducements, Apple would likely need to respond by offering similar inducements itself, thereby eroding the value to Apple of the fees (and handing back the value to consumers).

118. As the previous paragraph demonstrates, if competition is permitted between integrated mobile wallets on iOS devices, the potential for Apple to extract high fees (ultimately from consumers in general in a competitive banking market), will be constrained. If, however, Apple is able to achieve exclusivity with regard to iOS devices, Apple will face no such constraint and will be able to earn excessive revenues from Apple Pay at the expense of issuers and, ultimately, consumers. Moreover, there is a likelihood that competition between payment methods will be distorted, there will be inefficient over-use of Apple Pay, and the incidence of Apple's fees will be spread over all banking customers, rather than those that cause the fees.

119. To elaborate, if Apple were to enjoy exclusivity for Apple Pay with respect to iOS devices, Apple would be effectively a monopolist with regard to mobile payments using iOS devices. At the same time, the lack of consumer visibility of Apple's fees for the use of Apple Pay will undermine any competitive pricing constraint on these fees that would otherwise be exerted by alternative means of payment such as cash or physical cards: Apple's fees will have to be fully borne by issuers in the first instance, and iOS device users will not observe any visible cost of using Apple Pay, and will not substitute away from using Apple Pay if Apple sets high fees. Therefore, exclusivity and the lack of consumer visibility of Apple's fees will conspire to provide Apple with considerable ex post pricing power and the ability to charge excessive fees for the use of Apple Pay.

120. While the lack of visibility of Apple's fees will likely help to drive adoption of Apple Pay (since it will be perceived to be "free"), this will not only lead to excessive fees charged by Apple, but also to distorted and inefficient consumer choices between alternative payment methods. iOS device users will be led to believe that using Apple Pay has the same costs

as using cash or physical cards, whereas it in fact imposes additional costs in the form of Apple's fees. This will lead to socially inefficient over-use of Apple Pay.[56]

121. Moreover, the costs of banking in general will be driven up by these fees, impacting on all banking customers including users of non-iOS mobile devices as well as customers that do not make use of mobile payments at all. Although issuers would bear Apple's fees in the first instance, in a competitive banking market it is ultimately banking customers in general that will bear these costs as issuers will need to recover these costs and cannot do so directly from Apple Pay users. Apple's fees for Apple Pay are therefore likely to be passed-on, at least in part, to banking customers in general, through higher retail banking charges, higher interest rates on credit, or lower interest rates on deposits. This is a direct consequence of the competitive need for banks to recover at least part of the costs that Apple imposes on them.

122. This is all clearly problematic from a public interest perspective. First, Apple's fees for Apple Pay are likely to be excessive as Apple will face no constraints on its pricing from alternative mobile wallets on iOS devices or from alternative payment methods. Second, consumers will not make efficient cost/benefit calculations when deciding whether to use Apple Pay or alternative payment methods, as they will not face any signals about the additional costs of using Apple Pay. This will distort competition between payment methods and lead to inefficient over-use of Apple Pay. Third, the resulting high costs will be borne in the first instance by issuers, but in a competitive banking market will ultimately be passed-on, at least in part, to final consumers. This will have both efficiency and distributional implications: in particular, non-iOS device users and consumers that do not make mobile payments at all will bear the high costs caused by iOS device users taking advantage of Apple Pay (and doing so excessively due to Apple Pay's appearance of being a "free" service). Finally, to make matters worse, since iOS device users will not perceive any cost of using Apple Pay, this will enhance their demand for Apple Pay and expectations that their issuers will support Apple Pay, which will have a feedback effect on Apple's ability to increase its fees: issuers will have an even more limited ability to resist Apple's fee demands the more that customers make use of Apple Pay.

123. The business model that Apple has in mind for Apple Pay appears to follow Apple's approach in the music industry, where it has managed to secure a 30% fee on every song downloaded from iTunes. A similar fee is paid to Apple by app producers (and hence, ultimately, consumers) in the case of downloads from Apple's app store.[57] A significant difference in these cases is that Apple secured its high fees in music and apps by providing services (legal downloading of music and smartphones) that were unrivalled at the time. In the case of mobile payments, however, there are viable competitors existing already today,

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56 Note that I am not suggesting that (an appropriately priced) Apple Pay would be an inefficient choice of payment method for consumers *per se*. On the contrary, I expect that, if subject to competitive forces, Apple Pay would represent a valuable and efficient means of payment for many consumers in many situations. However, this does not imply that Apple Pay would always be an efficient choice, however priced. If consumers were to face the high charges that Apple will likely impose, consumers might in many instances find it more efficient to user other payment methods such as cash or physical cards even if this may be slightly less convenient. When I speak of an over-use of Apple Pay in comparison to other means of payment, I therefore mean an overuse *given the high price that Apple is likely to impose* after securing exclusivity for Apple Pay together with restrictions on pass-through, and given that customers will not face any signals of the costs of using Apple Pay.

57 See, for example: http://www.idownloadblog.com/2015/06/05/apple-70-30-media-split/.

and these competitors would be likely to limit Apple's ability to sustainably charge high fees if Apple were to waive or relax exclusivity as a result of collective negotiation.

6.5. Greater mobile wallet investment and innovation by issuers and third parties

124. The costs of investments in mobile wallets by issuers and third parties are largely fixed and common across customers and across platforms, leading to economies of scale and scope. For example, once an integrated mobile wallet has been developed for Android, there is only a small incremental cost for a similar integrated mobile wallet to be written for iOS (assuming that there is access to the API for the relevant integrated NFC hardware).

125. When deciding whether to make investments in mobile wallets, developers will have regard to the addressable market for the service and whether it is large enough to anticipate recovery of the fixed costs. It is straightforward that the smaller the addressable market the less investment that can be justified and the less innovation that will result.

126. The segment of the potential addressable market for mobile wallets and mobile payments represented by iOS device users is significant purely in terms of share of devices at around 35-40%.[58] This segment is even more significant for mobile wallet developers than this share suggests. As discussed in Section 4.2.1, iOS device users tend to be wealthier and likely to conduct more transactions and larger transactions than other customers. They also tend to be early and heavy adopters of new technologies and services that simplify their lives. They are also likely to value the ability to make mobile payments more than the average customer: for example they have a greater tendency to consider themselves "addicted to digital devices",[59] and to therefore regard their device as an extension of their lives, suggesting a greater willingness to embrace the opportunity to use it for payments. Given all of these characteristics, it is likely that iOS device users represent a more significant segment of the addressable market for mobile wallet developers than the segment of non-iOS device users.

127. Moreover, Apple has a history of successfully "mainstreaming" products and services that were niche before Apple turned its efforts to them.[60] There is a clear potential for Apple Pay to be the mobile wallet that "mainstreams" mobile payments using integrated NFC hardware, whereas to date there has been only limited use of this sort of mobile payment (and many failed mobile wallets along the way).[61] If consumers become familiar and

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58 See Section 4.2.1 above.

59 Todd Hixon, "What Kind of Person Prefers an iPhone," Forbes, 10 April 2014, accessed at: http://www.forbes.com/sites/toddhixon/2014/04/10/what-kind-of-person-prefers-an-iphone/.

60 Examples include the Apple II computer, iTunes, the iPod portable music player, the iPhone and the iPad tablet. In each case there existed products with similar characteristics that appealed only to a niche set of customers before Apple launched its products. Following the launch of Apple's products, however, and the widespread adoption of them, various rival manufacturers have benefitted from boosted sales of similar, but differentiated products. Currently Apple is developing Apple TV, which promises to change the way we watch television and online content. Again, there are similar products competing alongside Apple TV in the converging audio-visual/broadband space, however it is Apple TV that promises to turn these niche offerings into mainstream products.

61 According to Deloitte's *Mobile Consumer Survey 2014: The Australian Cut*, page 44:

comfortable with making mobile payments through Apple Pay, they are more likely to consider mobile wallets from other providers including their issuer. Therefore there is extra value to issuers and third party mobile wallet developers of being able to access iOS device users, as this segment has the potential to be significant adopters of mobile NFC payments through their exposure to Apple Pay.

128. It follows that without access to iOS device users, issuers and third parties will anticipate significantly diminished benefits from investments and innovations in mobile wallet technology. It is therefore likely that certain investments and innovations by issuers and third parties – that would be commercially justified if iOS device users were part of the addressable market – may not occur.

129. In relation to security, much has been made of Apple Pay's biometric (fingerprint) customer verification and use of tokenisation.[62] These are beneficial developments for the industry, and examples of the potential for innovations in the area of security that can be expected with competition between rival mobile wallets. However, it would be unwise to rely on one company to drive such innovation, particularly a company that, sheltered by exclusivity, would find itself to be a monopolist. There are many further ways in which issuer and third party mobile wallets have the potential to evolve and improve for consumers over time, including by taking advantage of other biometric data (such as face or iris verification), adding functionalities, making more information available in real-time, developing algorithms to optimise payment decisions and the use of loyalty points, and developing compatibility with additional mobile devices (such as smartwatches).

130. The extent to which these evolutions and innovations occur, the speed at which they occur and their quality are all likely to depend on the extent of returns that the developers anticipate.

131. To be clear, I am not suggesting here that the outcome of exclusivity for Apple Pay on iOS devices will be the complete exclusion of other mobile wallets. As I noted in Section 2.4, already today, even without access to the NFC hardware in iOS devices, a number of Australian issuers (notably, CBA, Westpac and Cuscal) as well as non-bank entities (e.g. Coles) have developed mobile wallets both for Android devices and for iOS devices (the latter relying on NFC stickers). My argument is not inconsistent with these developments. Although there clearly will be investment and innovation in mobile wallet technology even without a waiver or relaxation of Apple's exclusivity, it is likely that the investment and innovation will be less than if issuers and third parties were able to anticipate generating returns from those investments from iOS device users seeking integrated mobile wallet functionality as well as other users.

> *Three years ago analysts forecast the global annual value of transactions via mobile payment apps and enabled by Near Field Communications (NFC) technology would reach $40-$50 billion globally by 2014. However, deployment and uptake has been slower than anticipated with transaction values in 2014 expected to be less than $10 billion. Various solutions have been trialled by banks, financial institutions, mobile operators and retailers, but none have made any significant inroads.*

62 See, for example, Deloitte, *Mobile Consumer Survey 2015 – The Australian Cut*, page 47, accessed at: http://landing.deloitte.com.au/rs/761-IBL-328/images/deloitte-au-tmt-mobile-consumer-survey-2015-291015.pdf?mkt_tok=3RkMMJWWfF9wsRokvaTLcu%2FhmjTEU5z16O4sWK%2Bzi4kz2EFye%2BLIHETpodcMT8RlPbvYDBceEJhqyQJxPr3CKtEN09dxRhLgAA%3D%3D.

7. PUBLIC DETRIMENTS OF COLLECTIVE NEGOTIATION IN RELATION TO EXCLUSIVITY

132. This section considers the potential public detriments of an authorisation of collective negotiation in relation to exclusivity. I consider two types of potential public detriments. First, the potential for a loss of public benefits that might attach to Apple enjoying exclusivity as the only mobile wallet on iOS devices. To the extent that collective negotiation may alter bargaining positions and result in a waiver or relaxation of exclusivity, collective negotiation may sacrifice any such public benefits. Second, the potential for there to be failed negotiations between Apple and the applicants, with the result that there may be only limited deployment of integrated mobile wallets on iOS devices in Australia (i.e. only with respect to cards issued by American Express, ANZ and other non-applicant issuers).

7.1. Potential for loss of public benefits associated with exclusivity

133. Exclusivity can sometimes be justified on the basis that if will lead to certain public benefits, such as enhancing incentives for investment, reducing search costs, avoiding compatibility costs and assuring quality. Given these potential benefits of exclusivity, there is the potential for public detriment to result from a waiver or relaxation of exclusivity, should this follow from collective negotiation over exclusivity. However, for the reasons explained below, with respect to each of these potential effects I do not consider there to be any likely significant detriment.

7.1.1. Impacts on Apple's investment incentives

134. It is difficult to see public detriment in relation to an argument that without exclusivity Apple may lack incentives to invest in Apple Pay or in the promotion and take-up of Apple Pay in Australia.

135. Apple Pay is likely to have very similar if not identical functionality in Australia as in the rest of the world. There is no reason to think that there is any significant incremental (Australian-specific) investment required by Apple in the wallet technology itself. There is also no need for Apple to make any investments in the payments ecosystem surrounding Apple Pay, as merchant terminals accepting contactless payments via NFC technology are already ubiquitous in Australia.

136. It might be suggested that there is the potential for substantially less marketing and promotion by Apple of mobile wallets in Australia if collective negotiation were to result in Apple agreeing to waive or relax exclusivity for Apple Pay. The argument would be that if protected by exclusivity Apple would be likely to invest substantial amounts on the marketing and promotion of Apple Pay and thereby raise the awareness and adoption of mobile payments in general, whereas without exclusivity Apple would have less to gain and would have less incentive to spend on such promotions.

137. However, my understanding is that, in the US, Apple required the issuers to bear the costs of marketing and promotion of Apple Pay: it did not bear those costs itself.[63] A similar arrangement is likely to exist in Australia in the counterfactual. Therefore, there is no basis for exclusivity as a means for Apple to recover investments in significant Australian-specific

63 See, for example, Karen Webster, "Issuers to Apple Pay: Just Say No!", *pymnts.com*, 16 November 2015, accessed at: http://www.pymnts.com/news/2015/issuers-to-apple-pay-just-say-no-2/.

marketing. There is also no reason to think that the incremental spending by issuers in the counterfactual on the promotion of Apple Pay would be greater than the incremental spending that would occur by issuers on the promotion of their own proprietary integrated mobile wallets for iOS devices if exclusivity were waived or relaxed following collective negotiation. If exclusivity were waived or relaxed it is likely that a number of issuers (and potentially other third party mobile wallet providers) would invest substantially in marketing to attract iOS device users to their integrated mobile wallets. What is more, although one cannot be definitive, it is possible that marketing and promotion of mobile wallets *directly by Apple* may be *greater in the absence of exclusivity*, as Apple would need to compete with the issuers (and possibly other third party mobile wallet providers) to attract customers to Apple Pay, and may spend a significant amount in the process. Apple would have incentives to invest itself in marketing Apple Pay in order to increase its share of mobile payments and the revenues that it would earn from Apple Pay.

138. I have also considered the possibility that exclusivity might be beneficial because Apple has unique attributes in turning niche technologies into technologies adopted by the mass market, and that by focusing iOS device users on Apple Pay, there may be greater take-up of mobile payments compared to a non-exclusive situation in which there would be a fragmentation of iOS users across many mobile wallets. The argument would be that, as with the iPod, the iPhone and the iPad (to name a few), Apple Pay may be the implementation of mobile wallet technology that takes mobile payments from a niche to a mass-market service, generating long-term familiarity and comfortableness of consumers with mobile payments in general, which would have positive externalities for mobile payments on non-iOS devices as well as direct benefits with respect to iOS devices.

139. However, there does not seem to be any reason why *exclusivity* for Apple Pay is necessary for this to occur. Each of the other examples of Apple's success in mainstreaming technology occurred in the context of open competition (for music players, mobile handsets and tablets, respectively). The authorisation of collective negotiation by the applicants would not preclude Apple Pay developing as a mobile wallet on iOS devices in parallel with other integrated mobile wallets. Moreover, Apple Pay will always have an advantage over other mobile wallets as it will be part of the core offering on iOS devices, appearing with Apple's stamp of approval and by default in the iOS device at the time the device is purchased, rather than an app that needs to be independently searched for and installed.

7.1.2. Impacts on search costs

140. It might be argued that by tying Apple Pay to iOS devices, Apple reduces search costs for consumers: that is, by tying together two things that consumers find convenient to be consumed together (the smartphone and the mobile wallet), Apple saves consumers the costs of searching separately for a mobile wallet. However, while this may be a legitimate rationale for bundling Apple Pay with iOS, it is not a rationale for exclusivity for Apple Pay on iOS devices, and it does not suggest any detriment at all from collective negotiation that may achieve a waiver or relaxation of exclusivity. A waiver or relaxation of exclusivity would not mean that iOS devices could not come with Apple Pay already installed and "front and centre" for the iOS device user to see and use. It would only mean that other mobile wallets could also or alternatively be used, should the consumer prefer to.

141. To illustrate with an example from another industry, there may be benefits from tying a car stereo with a car so that when the car is sold the consumer immediately has a working car stereo installed and does not have to search for one and have one installed. But that is no

reason to preclude the consumer from ever having a different car stereo installed, should the consumer have a preference for it.

7.1.3. Potential compatibility costs

142. It may sometimes be costly for a manufacturer to design an interface between two components so as to allow for compatibility with components produced by competitors. The process of standardisation can, in principle, be costly in the consultation, negotiation and documentation of interfaces. Tying may therefore sometimes be justified as a technological solution that avoids these compatibility costs. However, the mobile phone industry is replete with application programming interfaces (APIs) and Apple regularly provides competitors with APIs for hardware components in its iOS devices. Certainly the costs have not been so prohibitive as to preclude non-iOS device manufacturers from volunteering the APIs to the NFC hardware in those devices.

7.1.4. Potential quality assurance issues

143. In principle, tying can preserve product quality and can protect a firm's reputation and brand name. Where two products are complements, and where the quality of one product (e.g. apps including third party mobile wallets) may influence the actual or perceived quality of the second product (e.g. iOS devices), tying can be a way for manufacturers such as Apple to maintain the quality and perception of the second product. It might therefore be argued that the exclusivity is necessary to ensure that the quality and brand perception of iOS devices and Apple are maintained in the face of potentially low quality mobile wallets produced by others.

144. However, Apple can (and does) address this concern through its wide discretion regarding the apps that it allows in its app store, which is the gateway to installation of all apps on iOS devices. Apple can use this discretion to ensure that rival mobile wallets are of high quality and functionality and do not lower the general perception of iOS devices or, indeed, mobile wallets in general. Moreover, the applicants are major players in Australia with their own reputations to protect and strong incentives to produce high quality mobile wallets that work well for consumers and encourage consumers to use them. This includes strong incentives to ensure a high level of payment and information security. Therefore there should be no concern regarding potential quality impacts from a waiver or relaxation of exclusivity in relation to the applicants or third party mobile wallet providers that they may choose to work with.

7.1.5. Summary

145. A waiver or relaxation of exclusivity may mean the loss of potential public benefits associated with exclusivity, such as incentives for investment, reductions in search costs, the avoidance of compatibility costs and quality assurance. However, in my view, based on the facts of this case, the potential benefits of exclusivity are limited. It follows that the potential detriment of a waiver or relaxation of exclusivity is correspondingly limited.

7.2. Potential for only limited deployment of integrated mobile wallets on iOS devices in Australia

146. As mentioned in Section 5, there is a possibility that the outcome of collective negotiation with respect to exclusivity is that collective negotiations between Apple and the applicants fail, and that Apple Pay is limited in Australia to cards issued by American Express, ANZ and other non-applicant issuers. If collective negotiations were to fail (and if the applicants

were not subsequently to negotiate individually with Apple), Australian iOS device owners would have limited integrated mobile wallet functionality. While Apple Pay would be functional with respect to cards issued by American Express, ANZ and potentially cards of other non-applicant issuers, the applicants together represent a large percentage of all issued cards in Australia. Therefore, for many and perhaps most iOS device users, there would be limited ability to make integrated mobile payments using those devices.

147. This, however, is only a possibility, and, I think, an unlikely one. It seems likely that Apple and the applicants will ultimately reach an agreement in relation to Apple Pay through collective negotiation, or, if collective negotiations fail, the applicants will subsequently negotiate individual agreements with Apple. As mentioned in Section 5, Apple and the applicants, together, risk reputational damage and customer dissatisfaction if negotiations are unsuccessful, and the applicants, in particular, also risk customer losses. The potential detriments of failed collective negotiations (and, subsequently, failures by the applicants to reach agreements with Apple through individual negotiations) should therefore be weighted by the probability of this outcome, which does not seem high.

148. Moreover, when considering whether there would be net public detriments if Apple Pay were not to be functional with respect to cards issued by the applicants, the ACCC should bear in mind that, as discussed in Section 6.4, the likely counterfactual if there is no collective negotiation would be one in which, although Apple may be fully functional (in the sense of working with cards of all issuers):

    a. Apple is likely to charge excessive fees for the use of Apple Pay;

    b. These fees will not be signalled to users (due to Apple's likely requirement that issuers not pass-through Apple's charges), who will consequently use Apple Pay excessively and inefficiently; and

    c. Apple's revenues from Apple Pay will be inefficiently and inequitably recovered across all bank customers.

149. Although iOS device users would be able to use integrated mobile wallet functionality through Apple Pay, and would be encouraged to do so due to the perception of Apple Pay being "free" to use, the fees that Apple will charge will be unconstrained, and ultimately passed on to consumers. At the same time, there will be an inefficient distortion of payments away from cash and physical card payments (including physical contactless card payments that are relatively convenient), as the additional costs of using Apple Pay will not be signalled to customers.

150. These counterfactual outcomes in theory could be worse than a situation in which Apple Pay is not functional with respect to cards issued by the applicants. In any event, as mentioned, even if this situation were considered to represent a net public detriment (i.e. even if failed collective negotiations were considered a worse outcome for consumers than if collective negotiation is not allowed), failed collective negotiations is only a *potential* outcome of authorisation, and there are good reasons to expect that Apple and the applicants will find their way to agreements even if collective negotiation is authorised.

8. COLLECTIVE NEGOTIATION WITH RESPECT TO RESTRICTIONS ON PASS-THROUGH

151. Collective negotiation in relation to restrictions on pass-through (i.e. the ability to reasonably reflect the additional costs of using third party mobile wallets in charges to customers) is also likely to result in net public benefits.

152. I understand that in other jurisdictions Apple has insisted that issuers not impose charges on customers that would reflect the additional costs of using Apple Pay (i.e. Apple's fees) and it is likely that Apple will insist on restrictions on pass-through here in Australia as well.

153. This recalls the situation in Australia, prior to 2004, when card schemes rule prohibited merchants from imposing customer surcharges. At the time, after reviewing the many studies of "no surcharge" rules that had all concluded that such rules were "not in the public interest," the Reserve Bank of Australia (RBA) and the ACCC took the following view on such rules:

> *The study's view is that 'no surcharge' rules suppress price signals that guide the efficient allocation of resources. They result in cross-subsidisation of cardholders by consumers who do not use credit cards; they restrict competition between merchants by limiting the range of pricing strategies they can use; and they prevent end-users exerting competitive pressures on merchant service fees and interchange fees. On balance, the study concludes that 'no surcharge' rules are not desirable. Merchants should not be prevented by the credit card schemes from passing on some or all of the merchant service fee through surcharges, even if some merchants do not avail of the flexibility for their own commercial reasons.*[64]

154. Similar to negotiations over exclusivity, the likely counterfactual in the absence of collective negotiation is that all issuers are likely to accept Apple's demand for restrictions on pass-through when Apple Pay is used, as issuers are otherwise likely to fear a loss of their competitive positions if they do not reach agreements with Apple. The same considerations as those discussed in Section 4 apply here.

155. Collective negotiation offers the potential for the applicants to obtain a waiver or relaxation of Apple's demands in relation to restrictions on pass-through. This brings with it the potential for the applicants to set price signals to their customers that reasonably reflect the additional costs of using Apple Pay (i.e. Apple's fees) and to recover those costs from the customers that cause the costs. This would allow for consumers to make more efficient decisions when deciding between different methods of payment (avoiding over-use of Apple Pay), promote efficient competition between alternative payment methods and avoid the distributional inequities that arise when restrictions on pass-through are applied (all of which is discussed in detail in Section 6.4).

156. The benefits of allowing for restrictions on pass-through in relation to Apple Pay reflect the benefits identified by the Reserve Bank of Australia (RBA) when reflecting on its 2003 reforms to the credit and debit card systems in Australia. These reforms included requiring card schemes to remove their "no surcharge" rules. In March 2013 the RBA stated:

64 RBA and ACCC, *Debit and Credit Card Schemes in Australia: A Study of Interchange Fees and Access*, October 2000, page 55, accessed at: http://www.rba.gov.au/payments-system/resources/publications/payments-au/interchg-fees-study.pdf.

> *This reform was important in allowing merchants to signal to consumers that some payment methods are more expensive for merchants to accept than others so that consumers could consider whether to pay with a less costly method. Directly charging users of higher-cost payment methods also meant that merchants did not need to build card acceptance costs into the prices of all their goods and services. In other words, it was no longer necessary for users of less costly payment methods to cross-subsidise users of more expensive payment methods. […]*
>
> *The ability of merchants to surcharge has made more apparent the cost of particular payment methods to consumers and enabled merchants to encourage the use of lower-cost payment methods. The Bank's 2010 Consumer Payments Use Study found that around half of consumers that hold a credit card would seek to avoid paying a surcharge by using a different payment method that does not typically attract a surcharge (debit card or cash). The effect of the Reserve Bank's reforms and the reduction in costs to merchants will have applied downward pressure on prices in a range of industries, to the benefit of all consumers.*[65]

157. Similarly, in its Issues Paper for its current Review of Card Payments Regulation, the RBA has stated:

> *The right to surcharge is an important mechanism for improving payments system efficiency. It allows merchants to signal the cost of different payment methods to users, influencing payment choices, and allowing merchants to pass costs directly on to those using more expensive payment methods so that the general level of merchants' prices can be kept lower. Surcharging is also one means by which merchants can exercise some pressure on merchant service fees and interchange fees; for example, the removal of the no-surcharge rule in the American Express system is likely to have contributed to the decline of merchant service fees for that system.*[66]

158. Realistically, as long as Apple does not set excessive fees, issuers may not impose charges for using Apple Pay, even if they are allowed to. Such charges are unpopular with customers, and given the importance to issuers of iOS device users as a customer segment (see Section 4.2.1) issuers may be wary of imposing charges on that segment that relate to their use of Apple Pay. However, it is nonetheless likely to be in the net public interest for issuers to successfully negotiate *the ability* to impose such charges, not least because this ability alone (and the potential for issuers to threaten to make use of it) may act to restrain Apple's fees below excessive levels.

159. It is, of course, important that any pass-through to customers no more than reasonably reflects the additional costs of using the third party mobile wallet. For example, in relation to card scheme fees there have been concerns that merchants have been setting charges not reasonably related to those fees. However, these concerns have arisen in a context in which there has been, since 2004, a regulatory prohibition on "no surcharge" rules that has not constrained the charges and therefore provided merchants with broad discretion. By contrast, collective negotiation by the applicants with Apple in relation to restrictions on pass-through is likely to result not in a blank cheque for the applicants to charge whatever they like, but in a delimited ability to charge customers amounts that may be tied directly to

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65 Reserve Bank of Australia, *Reforms to Payment Card Surcharging*, March 2013, accessed at: http://www.rba.gov.au/payments-system/surcharging/index.html.

66 Reserve Bank of Australia, *Review of Card Payments Regulation: Issues Paper*, March 2015, Chapter 4, accessed at: http://www.rba.gov.au/payments-system/reforms/review-of-card-payments-regulation/issues-for-review.html.

the fees charged to the applicants by Apple. Moreover, should an issuer attempt to charge an excessive amount for the use of Apple Pay, it is likely to experience a customer backlash and reputational damage as customers will be able to compare what they are charged for using Apple Pay to what they are charged for using other mobile wallets or for using contactless cards. There is also the further safeguard of the potential for regulatory restrictions on pass-through levels, similar to those that have been recommended in relation to merchant surcharging by the Financial System Inquiry report (Recommendation 17)[67] and that are currently being consulted on by the Payments System Board of the RBA.[68]

160. In summary, concerns that pass-through may turn out to be excessive should not be overblown, for the reasons just given. Such concerns also do not deny that the suppression of price signals through restrictions on pass-through in the case of Apple Pay is against the public interest and that there would be net public benefits from collective negotiations to the extent that this can be expected to increase the likelihood that issuers can persuade Apple to waive or relax such rules and allow for reasonable reflection of Apple's fees in customer charges (should issuers choose to do this).

9. COLLECTIVE NEGOTIATION WITH RESPECT TO SECURITY STANDARDS

161. The applicants are also seeking authorisation to negotiate collectively in relation to security standards. There is a likelihood that in a counterfactual without collective negotiation, the imbalance in bargaining positions and the concern of issuers to gain a competitive advantage (or not find themselves at a competitive disadvantage with respect to the important iOS device user customer segment), as previously discussed in Section 4, will result in issuers accepting or adopting processes and safeguards that may be inconsistent or inadequate from a security and fraud perspective. In this context, there are likely to be net public benefits from collective negotiation by the applicants with Apple in relation to a common set of security standards. This would enable the entire system and all participants, including consumers, to benefit from the efficiencies of a single set of negotiations over these matters and a consistent industry-wide set of standards that minimises fraud and maximises consumer confidence in mobile payments.

162. Although Apple and other third party mobile wallet providers would have incentives for their mobile wallets to be perceived as secure, their incentives may be muted to an extent by the fact that, while Apple wants to maximise the use of Apple Pay, Apple does not ultimately bear the costs of fraud (whereas the issuers typically do).

163. The importance of collective negotiations with Apple and, through this, the adoption of a consistent industry-wide set of security standards for mobile payments, is highlighted in a number of reports of high rates of fraud associated with Apple Pay soon after its launch in the US (which, according to one report, was as high as 6%, compared to 0.1% for swipe

67 See http://fsi.gov.au/publications/final-report/chapter-3/interchange-fees/.

68 See RBA, *Review of Card Payments Regulation: Issues for Consultation*, March 2015, accessed at: http://www.rba.gov.au/payments-system/reforms/review-of-card-payments-regulation/issues-for-consultation.html.

card transactions).[69] According to these accounts, the problems experienced with Apple Pay in the US stemmed from inadequate customer identification and verification (ID&V) processes at the time of "on-boarding" card details into the wallet. This in turn stemmed from the incentives of Apple (and perhaps some issuers) to make "on-boarding" as simple as possible for iOS device users in a context in which issuers were "desperate to become their customers' default card on Apple Pay" and consequently "did little to build their own defences or to push Apple to provide more detailed information about its customers".[70]

164. While it may not be entirely clear from these accounts whether the fraud problems experienced in the US were a function of weak security processes within Apple Pay, weak processes within some issuers, or both, the point is that if issuers negotiate individually with Apple without industry standards, there is a high risk that a similar outcome will transpire in Australia. In particular, even if many issuers manage to ensure adequate security processes in relation to Apple Pay, the failure to do so by some issuers (who may, for example, be keen to get a competitive advantage over others in terms of having customers on-boarded to Apple Pay quickly), may damage customer confidence in mobile payments generally and generate negative externalities for all: issuers, mobile wallet providers, merchants and consumers. In short, widespread adoption of mobile payments may be hampered if customers are given reasons to perceive mobile payments as less secure than other payment methods.

10. CONCLUSION AND OPINION ON THE NET PUBLIC BENEFIT OR DETRIMENT OF THE PROPOSED COLLECTIVE NEGOTIATION

165. Collective negotiation in relation to *exclusivity* strengthens the bargaining position of the applicants and increases the likelihood that Apple will agree to waive or relax Apple Pay exclusivity in some way. As explained in Section 6, a waiver or relaxation of exclusivity is likely to bring significant public benefits in the form of greater choice, lower prices, better quality, lower fees for the use of Apple Pay and greater investment and innovation in mobile wallet technology. A waiver or relaxation of exclusivity may, at the same time, mean the loss of potential public benefits associated with exclusivity, such as incentives for investment, reductions in search costs, the avoidance of compatibility costs and quality assurance (see Section 7). However, the potential benefits of exclusivity are limited on the facts of this case, and their loss is likely to be outweighed by the significant benefits of a waiver or relaxation of exclusivity.

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69 See, for example, Daisuke Wakabayashi and Robin Sidel, "Fraud Comes to Apple Pay," *Wall Street Journal*, 3 March 2015, accessed at: http://blogs.wsj.com/digits/2015/03/03/fraud-comes-to-apple-pay/; "Spike in Fraud has Experts Doubting Apple Pay," *pymnts.com*, 25 March 2015, accessed at: http://www.pymnts.com/news/2015/spike-in-fraud-has-experts-doubting-apple-pay/; and Andrew Ross Sorkin, "Pointing Fingers in Apple Pay Fraud," *New York Times*, 16 March 2015, accessed at: http://www.nytimes.com/2015/03/17/business/banks-find-fraud-abounds-in-apple-pay.html.

70 Andrew Ross Sorkin, "Pointing Fingers in Apple Pay Fraud," *New York Times*, 16 March 2015, accessed at: http://www.nytimes.com/2015/03/17/business/banks-find-fraud-abounds-in-apple-pay.html. Sorkin further explains: "Some bank executives acknowledged that they were so scared of Apple that they didn't speak up. The banks didn't press the company for fear that they would not be included among the initial issuers on Apple Pay."

166. Collective negotiation in relation to *restrictions on pass-through* is also likely to result in net public benefits. Collective negotiation offers the potential for the applicants to obtain a waiver or relaxation of Apple's demands in relation to restrictions on pass-through. This brings with it the potential for the applicants to set price signals to their customers that reasonably reflect the additional costs of using Apple Pay and to recover those costs from the customers that cause them. This would allow for consumers to make more efficient decisions when deciding between different methods of payment (avoiding over-use of Apple Pay), promote efficient competition between alternative payment methods and avoid the distributional inequities that arise when restrictions on pass-through are in place.

167. There are also likely to be net public benefits from collective negotiation in relation to a common set of *security standards*. This would enable the entire system and all participants, including consumers, to benefit from the efficiencies of a single set of negotiations over these matters and a consistent industry-wide set of standards that minimises fraud and maximises consumer confidence in mobile payments.

168. There is a possibility that collective negotiation will lead to failed negotiations between Apple and the applicants, and that Apple Pay would then not be functional with respect to cards issued by the applicants. This, however, is only a possibility, and it seems likely that Apple and the applicants will ultimately reach agreements in relation to Apple Pay, either through collective negotiations, or, subsequently, individual negotiations, given the reputational damage and customer dissatisfaction that they would otherwise experience, as well as the loss of customers that the applicants in particular would experience (to issuers that have reached agreements with Apple, such as ANZ). In any event, the possibility of failed collective negotiations needs to be considered against the likely counterfactual if collective negotiations are not allowed, which is that Apple will be unconstrained and able to charge excessive fees for Apple Pay, there will be excessive and inefficient use of Apple Pay at the expense of less costly payment methods, and Apple's fees from Apple Pay will be inefficiently and inequitably recovered across all banking customers rather than from those that cause them.

169. I therefore conclude that there are likely to be net public benefits of collective negotiation by the applicants in relation to exclusivity, restrictions on pass-through and security standards.

APPENDIX A: ILLUSTRATION OF PRISONERS' DILEMMA PAYOFFS

170. The table below is a simple heuristic illustration of the payoffs that may exist in the context of issuers' negotiations with Apple. For simplicity, let us assume that there are just two issuers in Australia and that they are of similar size. I use this simplification to illustrate the dynamics of the negotiations that may lead to a Prisoners' Dilemma. The "payoffs" in the table can be thought of as profits for each issuer – higher payoffs, therefore, are preferred to lower payoffs.

Table 1: Simple Heuristic Illustration of Prisoners' Dilemma Payoffs

Issuer 1 \ Issuer 2	Accept Exclusivity	Resist Exclusivity
Accept Exclusivity	(1 / 1)	(3 / -1)
Resist Exclusivity	(-1 / 3)	(2 / 2)

171. If the issuers were able to coordinate and resist exclusivity (bottom right corner) they may both do better than if both accepted exclusivity (top left corner). This would be the case, for example, if Apple's best response to being faced with both issuers resisting exclusivity would be to waive exclusivity in order that Apple Pay be functional for iOS device owners.[71] The issuers would then be able to launch their own bank proprietary integrated mobile wallets on iOS devices alongside Apple Pay and earn greater profits (bottom right corner) than if Apple Pay were the only mobile wallet on iOS devices (top left corner).

172. However, if one issuer were to resist exclusivity and the other were to accept (e.g. the bottom left corner), the first issuer would do worse than if it were to accept exclusivity (and the second issuer would do better). This is because the second issuer would be the only issuer offering its customers the ability to use iOS devices for integrated mobile wallet payments (via Apple Pay), and would therefore have a competitive advantage in relation to remaining or becoming the primary issuer for customers that use iOS devices. It follows that in individual negotiations, resisting exclusivity comes with the risk of being "outflanked" by your competitor if your competitor expects to gain more from being the only issuer available for customers that use iOS devices (via Apple Pay) than by joining you in resisting exclusivity.

173. In this game, both issuers would be better off if exclusivity were resisted by both (profits of 2 each) than if exclusivity were accepted by both (profits of 1 each), however they both have a "dominant strategy" to accept exclusivity: in the absence of coordination, each issuer is better off accepting exclusivity regardless of the action that the other issuer takes. If the payoffs are the Prisoners' Dilemma payoffs, absent some mechanism to overcome this dominant strategy, the equilibrium will be sub-optimal for both issuers and Apple will be able to sign up all issuers to agreements that give Apple Pay exclusivity on iOS devices. Coordination by the issuers in the form of collective negotiation with regard to exclusivity, as proposed in the application for authorisation, would overcome this situation.

71 In the simple setting I have posited, there are only two issuers, so if both resist exclusivity, Apple Pay would not be functional for any iOS device users and Apple may be persuaded to waive exclusivity in some form. A more realistic setting would be one in which the issuers that collectively resist exclusivity together represent a sufficiently large share of issued cards to persuade Apple to waive exclusivity in some form.