

Authorisation applications A91546 & A91547



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1. Executive Summary

The Commission should reject the application by four of Australia's largest banks to jointly negotiate the terms and conditions with third party mobile wallet providers and to institute a joint boycott during those negotiations.

Authorisation of a cartel amongst the applicant banks who control access to two thirds of all cardholders in Australia would result in significant consumer harm and perpetuate the oligopolistic banking market conditions described recently by the Chair of the Commission.¹

Apple works with card issuers to facilitate, through Apple Pay, an additional presentment method that card issuers can make available to their customers. Over 3,000 issuers worldwide have adopted Apple Pay, including American Express and ANZ in Australia.²

Apple Pay is an example of competition and innovation that the applicant banks evidently perceive (wrongly, in Apple's view) as a threat. The applicant banks treat Apple Pay as being mutually exclusive with their own mobile wallet apps. Contrary to the assertions made by the applicant banks, Apple does not restrict its partners from developing their own iOS apps, nor supporting mobile payments on other platforms or in other forms. Every major Australian bank has an iOS mobile banking app (which are in the top listings in the finance apps on the App Store for iPhone and iPad), and two of the applicants offer mobile payment wallets on iOS as well as other platforms. Section 4.2 of the applicants' own submission identifies numerous mobile payment and mobile wallet providers that compete with Apple Pay in Australia. Globally there are a number of other mobile payments apps and wallets on the iOS platform today, including Paypal, Venmo, Walmart Pay, Square, and Twint (coming soon).

Apple Pay is currently available to Australian consumers only through American Express and ANZ. Apple has tried, and failed, to negotiate commercial terms with each of the applicant banks except one, which has not even been willing to sign a confidentiality agreement and thus has not yet been provided with a copy of Apple's initial terms. This demonstrates that each individual applicant bank possesses a significant amount of bargaining power against Apple. Apple cannot offer Apple Pay to the applicant banks' customers without the applicant banks (who collectively represent 66% of the issued credit cards in Australia) agreeing to terms with Apple.

As each of the banks has individually resisted serious engagement with Apple for the past two years, collectively negotiating will further entrench the applicant banks' position by ensuring that all of them can only advance in lockstep with the slowest, least willing member. The applicant banks would know that they can continue to hold out without the threat that one of their competitors will introduce Apple Pay for their customers, which could result in the loss of some customers who will switch banks in order to access Apple Pay. This competitive dynamic, which the applicant banks explicitly want to avoid, would benefit Australian consumers.

Based on the banks' application, if the Commission permits the applicant banks to negotiate with Apple as a collective group, the banks will not agree to offer Apple Pay unless: (1) Apple allows the banks to charge consumers fees for using Apple Pay; (2) Apple provides direct access to the NFC radio; and (3) Apple agrees to "security" guidelines drafted by the applicant banks that applies to just third-party wallets and not the applicant banks' own mobile payment apps.

Apple will not and cannot agree to these terms because they undermine the availability, security and privacy our customers expect when using Apple devices to make payments.

¹ "The big banks have increased their market share in recent years and they're well known to be making quite high margins," Mr Sims told The Australian. "I look forward to the productivity commission's inquiry to find out how they are able to keep doing that and what the barriers are for others trying to challenge them. It's fair to say that, even though you've got four main players, they do have about 85 to 90 per cent of the market share and the competition between them is not as intense as you you'd expect." <http://www.theaustralian.com.au/business/financial-services/accc-chief-rod-sims-urges-banking-review/news-story/80cf3f14abcc90ed4ae7f36fe44ac2da>

² In the Final Report of its Retail Banking Market Investigation dated 9 August 2016, the UK Competition & Markets Authority notes: "Several banks have also indicated that they see digital wallet services as enhancements to their PCA and credit card offerings, suggesting a degree of complementarity rather than substitutability", at [4.25]

The only effect that the proposed collective bargaining/boycott could have is to further delay, or even block, the expansion of Apple Pay in Australia. This will put a brake on new competition, with respect to digital presentment methods and retail banking services more broadly, by stifling the incentive for existing players to develop innovative new solutions that build upon and compete against the security, privacy and convenience of Apple Pay.

The fact that the applicant banks have requested a three year period of authorisation, which is well-beyond the period of time that it would take parties to agree (or not agree) to terms in a commercial negotiation, suggests that the applicant banks are primarily focused on erecting barriers for Apple Pay, and other third-party wallet providers, becoming available to Australian consumers.

The Commission must not grant authorisation in respect of a cartel provision unless it is:

*"satisfied in all the circumstances (a) that the provision has resulted or is likely to result in a benefit to the public and (b) that the benefit outweighs or would outweigh the detriment to the public constituted by any lessening of competition that has resulted or is likely to result, from giving effect to the provision"*³

These conditions cannot be satisfied. If granted, the authorisation would harm consumers, lessen competition and reduce innovation in the banking sector, of which the payments system is a core part. It would also create a troubling precedent.

Boycotts among competitors are cartels and are a hard-core breach of the *Competition and Consumer Act*. Any collective boycott conduct by the applicant banks (and any other issuers who choose to join the cartel) will materially affect the ability of third party wallet providers, including Apple, to reach meaningful scale within Australia in the three year authorisation period.

As the Australian Competition Tribunal (**Tribunal**) has stated:

*"In the thirty-two years of the life of the Act, the ACCC and its predecessor have never before authorised a collective boycott. Collective boycotts have the capacity to inflict great damage not only on the targets but also on employees, related businesses, consumers and the boycotters themselves. If a market was workably competitive to begin with, it is highly unlikely that providing suppliers with the ability to collectively boycott their customers could be shown to produce benefits to outweigh the quantum of these likely detriments."*⁴

Apple does not believe that the applicant banks can substantiate with credible evidence, or even in economic theory, any public benefits that they say, could arise from the boycott.

Apple submits that, for the reasons given in this submission and the accompanying report by Dr Pleatsikas, the application for authorisation should be rejected. The balance of this submission responds to each of the matters upon which the Commission has requested specific comment.

2. Likely future without

2.1. Please comment on how contactless payments are likely to develop in Australia over the next five years

There is a wide range of contactless payment options already available to Australian consumers.

³ *Competition and Consumer Act*, section 90(5B).

⁴ *Re VFF Boycott Application* (2006) ATPR 42-0120, at [442]

Mobile wallet offers will continue to grow and become more popular for Australian consumers because of their convenience, and superior privacy and security features.

Further innovation will occur across the range of competing mobile wallet solutions.

Contactless payment platforms in Australia

As described in Section 4 of the applicants' submission, there are many mobile payment and contactless presentment options available to Australian consumers today, as third party mobile wallets are starting to gain traction in Australia. These include:

- Mobile banking apps for iOS, Android and Windows phones which allow customers to check their account balances, transfer funds to third parties and, in many cases, complete point-of-sale transactions;
- NFC-enabled credit and debit cards which allow customers to make purchases using Visa PayWave, MasterCard PayPass or another NFC-enabled payment platform, in many cases without needing to enter a PIN for transactions below \$100;
- Alternative solutions which are integrated with a mobile banking app, for example the Commonwealth Bank of Australia NFC sticker, which can be attached to iOS and Android devices and enabled or disabled within the Commonwealth Bank of Australia app;
- QR-code based wallets such as Bendigo Bank's Redy wallet, which is available on iOS and Android devices; and
- Solutions such as "Cash By Optus", which include payment accessories such as wrist-bands that can be used to make payments on iOS devices at NFC-enabled payment terminals.⁵

According to research by MWE Consulting, in August 2016, Australians are now estimated to be spending over \$2 billion a week on contactless or "tap and go" payments.⁶

Section 4.2 outlines a range of other developments in other countries for mobile wallets to be offered within iOS and other devices.

Apple Pay and the other third party mobile wallets are beginning to offer, and will continue to offer, innovation and increased consumer choice to the already wide range of traditional and innovative new payment methods available to Australian consumers.

Future developments and improvements upon existing mobile wallets

Apple expects that banks and third party mobile wallet providers will continue innovating and developing new and better solutions. Australian consumers will benefit from the evolution of these new technologies, as well as the introduction of further innovations by the banks which piggyback off the benefits already available through Apple Pay and other digital wallet solutions (as has been the experience overseas - see section 4.2).

Privacy and security are key features in respect of which mobile wallet providers differentiate themselves by competing to offer innovative privacy and security solutions.

Apple's innovative security system reduces markedly the risk of user's credit and debit cards being compromised. For example, Apple Pay offers the following key benefits to consumers:

⁵ <http://www.optus.com.au/shop/mobile/phones/wearables/cash-by-optus>

⁶ <http://www.smh.com.au/business/retail/110bn-australias-contactless-boom-20160805-gqmg7j.html>

- Every transaction requires authentication through TouchID or the user's passcode.
- Apple Pay uses both tokenisation and a secure element embedded within an Apple device to ensure optimum security is maintained.
- Apple does not collect any transaction information that can be tied back to a user, nor does Apple store the actual credit or debit card numbers within the secure element. Instead, the secure element contains a token, which is a proxy for the actual card number. At the time of transaction, the Apple device transmits both the token and a single use "dynamic cryptogram."⁷ Neither Apple nor the device sends actual credit card or debit card numbers to merchants.⁷

As observed by Dr Pleatsikas in his attached report:

"In the parlance of dynamic competition, mobile wallet products are viewed as a paradigm shift⁸ that will fundamentally alter (and/or disrupt) the character of the payment instruments industry".⁹

2.2. Absent the proposed collective negotiations, do you see the use of Apple Pay becoming widespread in Australia? For example, are banks likely to accept the terms offered by Apple?

Apple's goal is to offer Apple Pay to as many Australian customers as possible. Apple Pay has been embraced by over 3,000 issuers worldwide, including American Express and ANZ in Australia.

Apple anticipates that a number of Australian banks will, in the absence of the proposed collective negotiation, offer Apple Pay to their customers.

Apple believes that, absent the proposed collective negotiations, Apple Pay will become widespread in Australia based on its success in other markets.

- Tens of millions of users around the world are enjoying Apple Pay today.
- With the launch of France, Switzerland and Hong Kong in June 2016, Apple Pay is now live in 9 markets (joining US, UK, Canada, Australia, China and Singapore).
- Adoption inside and outside the US has been strong, with over half of total transaction volume now coming from non-US markets.
- App developers that have integrated Apple Pay have doubled their checkout rates due to the simplicity of "one-touch" checkout, rather than requiring customers to go through lengthy account creation and payment flows.
- Apple Pay will debut on the web later this year, so consumers can easily make secure and private payments with Safari on supported Macs, iPads and iPhones.
- Consumers who use Apple Pay have customer satisfaction rates of 97% or higher (as reported by third party studies).

⁷ Additional details regarding Apple Pay security and privacy can be found at <https://support.apple.com/en-au/HT203027> and details about how security technology and features are implemented within Apple's iOS platform can be found at <http://www.apple.com/au/privacy/> and http://images.apple.com/business/docs/iOS_Security_Guide.pdf.

⁸ C. Pleatsikas and D. Teece, "New Indicia for Antitrust Analysis in Markets Experiencing Rapid Innovation," in J. Ellig (ed.), *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, Cambridge University Press, 2000.

⁹ Pleatsikas Report, 24 August 2016, at [9]

- A significant number of Australian customers have attempted to provision their currently ineligible cards (such as cards issued by the applicant banks) onto Apple Pay since its launch with American Express and ANZ, which demonstrates that there is unmet demand for Apple Pay.

Apple anticipates that, absent collective negotiations and the proposed associated boycott, Apple and some individual banks that are not currently offering Apple Pay are likely to reach agreements to bring Apple Pay to their customers, and many of these individual banks would also offer their own mobile wallet solutions through iOS and other platforms. This would, in turn, lead to further innovation, not only amongst third party wallet providers like Apple, Google, Samsung and others, but also amongst the banks themselves as they individually seek to develop new and better offerings to their customers utilising Apple Pay or other mobile wallet technologies.

As has been the case in other markets, there may be Australian banks who will not offer Apple Pay as a presentment method available for their card holders. Ultimately, it is the bank who decides whether to make Apple Pay an option for its cardholders, and whether the terms offered to the bank by Apple in order to do so, are acceptable.

2.3. How would the situation be different with the collective bargaining/boycott?

Apple expects that, if the boycott and collective negotiation conduct were permitted to occur, the banks involved will advance in lockstep with the slowest, least willing member of their cartel.

This delay is likely to harm consumers and slow the pace of innovation for mobile wallets in Australia.

Apple has been negotiating separately with a range of Australian banks since 2014 and has been able to agree to terms following bilateral negotiations with American Express and ANZ.

Apple's perception is that it is the unwillingness of the applicant banks to negotiate with Apple on a range of issues that has led to the current impasse. Apple is willing to negotiate with the applicant banks as it has bilaterally with ANZ and American Express in Australia and hundreds of other banks in the US and the UK. Yet Apple has met with strong resistance from each applicant bank. One of the applicant banks is yet to even sign a confidentiality agreement and thus has not yet even been provided with a copy of Apple's initial terms.

As each of the applicant banks has individually resisted serious engagement with Apple for the past two years, collectively negotiating will further entrench the applicant banks' position by ensuring that all of them can only advance in lockstep with the slowest, least willing member. The applicant banks would know that they can continue to hold out without the threat that one of their competitors will introduce Apple Pay for their customers, which would result in the loss of some customers as some will switch banks in order to access the innovative Apple Pay presentment method. This competitive dynamic, which the applicant banks explicitly want to avoid, would benefit Australian consumers.

The collective boycott conduct will not provide a catalyst for moving negotiations forward on reducing the effectiveness of key security aspects of Apple Pay. Rather, it risks leading to significant consumer harm and a further delay to the introduction of Apple Pay as a mobile wallet for at least 66% of cardholders in Australia whose cards are issued by one of the applicant banks (and more, if additional banks join the applicants) who may choose to use it.

Apple Pay is an example of competition and innovation that the banks evidently perceive (wrongly, in Apple's view) as a threat.

Apple's goal is to work together with each card issuer to facilitate, through Apple Pay, an additional presentment method that card issuers can make available to their customers. This philosophy has been embraced by over 3,000 issuers worldwide, including American Express and ANZ in Australia.¹⁰

Instead of viewing Apple Pay as an attractive alternative presentment method that they can offer to their customers for use with the existing cards that the banks issue to both their own and their customers' significant benefit, the applicant banks appear to view Apple Pay as a disruptive threat.

That mobile wallets offer disruption to the applicant banks' own mobile wallets was stated publicly by the Commonwealth Bank of Australia:

"If it not Apple, it might be Google; if it is not Google, it might be Samsung; if it is not Samsung, it might be Amazon; if it is not Amazon, it is going to be someone else"

"Are we going to be able to sit here today and pick the major winners? No. But the disruption is structural. It is only going one way. And I don't think there will ever be a point where me or my successor, or his or her successor, is ever going to sit here and say their war is done and we won. This level of innovation is here to stay."

"But we have got customers, we have got distribution, we have got brand, we have got product. So as long as we are adding to that investment and have the right execution focus, we should be able to be really competitive".¹¹

The potential disruption by Apple Pay and other innovative third party mobile wallets has also been acknowledged by industry commentators. For example:

- *"The payments landscape is disrupted as substantial portions of customers and merchants embrace smartphone based mobile payments.... This shift, in turn allows new entrants to capture a substantial portion of the industry and extend payments to new areas."*
- *"Apple could drive major consumer and merchant adoption through a near-field communication-enabled iPhone and expand iTunes payments wallet."*
- *"For banks... Unless they focus on innovation, banks may lose additional core customers and revenues as new players exploit the opportunity."*
- *"For payment networks ... [T]he primary concern is to remain relevant to all parties and to develop mobile payments infrastructure to the market."*

— Payments 2020: Scenarios for Dynamic Evolution
McKinsey & Company

Apple is concerned that the applicant banks may attempt to use collective bargaining/boycott to blunt Apple Pay precisely because they want to control the direction and pace of innovation and advantage their own mobile wallets. Obtaining authorisation for the present application may make it easier for the applicant banks to slow this innovation and disruption by delaying the introduction of Apple Pay to a large proportion of Australian cardholders, to the detriment of the applicant banks' own customers.

¹⁰ In the Final Report of its Retail Banking Market Investigation dated 9 August 2016, the UK Competition & Markets Authority notes: "Several banks have also indicated that they see digital wallet services as enhancements to their PCA and credit card offerings, suggesting a degree of complementarity rather than substitutability", at [4.25]

¹¹ I Narev, quoted in "\$2b fee sticking point as Apple wrangles with Australia's big four banks", Sydney Morning Herald, 17 August 2015

On the other hand, the applicant banks have failed to provide any evidence that authorisation of the collective bargaining/boycott would lead to the outcomes sought by the applicant banks (even if, which appears doubtful, those outcomes would be in the interests of Australian consumers).

As observed by Dr Pleatsikas in his attached report, the applicants have put forward no plausible basis or quantification of how the factual and counterfactual they proffer would differ in terms of, for example:

- The number of competitors.
- Transaction fees paid by financial institutions for mobile wallet products.
- Transaction fees paid by consumers for mobile wallet products.
- Types and Features of mobile wallet products.¹²

Apple is concerned that, based on the applicant banks' application, if the Commission permits the banks to negotiate with Apple as a collective group, the applicant banks will not agree to offer Apple Pay unless: (1) Apple allows the applicant banks to charge consumers fees for using Apple Pay; (2) Apple provides direct access to the NFC radio; and (3) Apple agrees to "security" guidelines drafted by the applicant banks that apply to just third-party wallets and not the applicant banks' own mobile payment apps.

Apple will not and cannot agree to these terms because they undermine the availability, security and privacy of NFC-based payments on Apple devices. Apple believes user privacy is paramount and has taken a well-publicized position on our standards for privacy. Similarly, Apple takes seriously its commitment to user security. Creating the most private and most secure mobile payment solution is in the best interests of our customers globally, including our Australian customers, and we will not compromise our principles and put customers at risk.

Thus, the only effect that the proposed collective bargaining/boycott could have is to further delay the expansion of Apple Pay in Australia and, in so doing, allow the applicant banks to advantage their own wallets, and put a brake on new competition with respect to presentment methods and retail banking services more broadly by stifling the incentive for existing players to develop innovative new solutions that build upon and compete against the security, privacy and convenience of Apple Pay.

3. Areas of competition

3.1. Please provide any comments regarding the area(s) of competition that may be affected by the collective bargaining/boycott

The areas of competition likely to be affected by the collective bargaining/ boycott are:

- € ***competition among Australian issuers to offer consumers the most innovative presentment solutions, which affects the level of competition in Australian banking services generally***
- € ***competition between banks to acquire services from mobile wallet providers and providers of third party tokenization services***
- € ***competition between providers of mobile wallet services***

As the Commission has stated in the context of bank mergers, Australia's banking markets are heavily concentrated and suffer from high entry barriers. Innovation and new entry in mobile wallets holds significant potential for substantially increasing competition between banks. But this

¹² Pleatsikas Report, 24 August 2016, at [90]

is not possible if the major banks can co-ordinate between themselves the timing and features of mobile wallet technology offered to their customer base.

Consumers of retail banking services stand to lose the most from the proposed collective bargaining/boycott. First, they will be denied or delayed in their access to the benefits of Apple Pay unless they switch banks. Second, they will be denied the benefits that would flow from the further innovation that would be introduced in Australia by other mobile wallet providers and the banks themselves in response to Apple Pay if introduced by at least some banks.

The proposed collective bargaining/boycott would slow innovation and reduce choices by protecting the applicant banks from competition with each other and from Apple for the next three years. The applicant banks would have little incentive to compete amongst themselves to develop the best and most innovative presentment methods for their customers.

By stifling innovation in this manner, the proposed conduct will reduce competition directly in respect of presentment methods as well as the markets for general retail banking services more broadly, all to the detriment of Australian consumers.

4. Public benefits and detriments

4.1. To what extent do consumers value Apple Pay and expect their bank to offer payments via Apple Pay?

The evidence from international markets and to date in Australia, set out in section 2.2 above, indicates that consumers strongly value Apple Pay.

The response to Apple Pay in markets where banks have offered it to their cardholders has been enthusiastic among consumers, merchants and app developers, as more fully explained in response 2.2.

4.2. Do you consider that enabling card issuers to participate in any mobile payment/wallet services (eg on Apple devices) is important in the context of mobile payments and do you expect that collective negotiations in relation to this issue will be successful?

Apple Pay provides the banks with substantial benefits in the form of an innovative additional service through which they can expand their relationship with their cardholders.

Apple Pay has been embraced by over 3,000 issuers worldwide, including American Express and ANZ in Australia.

In many ways, Apple Pay complements the applicant banks' mobile offerings by interacting with their own mobile apps.

However, this innovation is threatened and, at the very least, will be delayed by the proposed collective negotiations.

Apple wishes to encourage as wide a take up of Apple Pay among card issuers as possible, and agrees that card issuers should be able to participate in, and develop alternatives that compete against, third party mobile wallets.

Contrary to the assertions made by the applicants, Apple does not restrict its partners from developing their own iOS apps, nor supporting mobile payments or alternative presentment methods on other platforms or in other forms. Indeed, every major Australian bank has an iOS mobile banking app (which are in the top listings in the finance apps on the App Store for iPhone and iPad), and two of the applicants offer mobile payment wallets on iOS as well as other platforms. Section 4.2 of the applicants' submission describes the numerous existing mobile

payment and mobile wallet providers in Australia and thus the various presentment methods with which Apple Pay must compete to win over customers. Globally there are a number of other mobile payments apps and wallets on the iOS platform today, including Paypal, Venmo, Walmart Pay, Square, and Twint (coming soon).

Many banks offer Apple Pay in addition to their own mobile payment solution. For example, J.P. Morgan Chase, one of the largest US banks, adopted Apple Pay and is also launching its own mobile wallet, Chase Pay, on iOS. In the UK, Barclays adopted Apple Pay and offers its own mobile payment solution, called Bpay, on iOS.

Much of the applicant banks' application relates to their desire to have direct access to the NFC antenna contained in Apple devices. This is not open to negotiation with any bank. Apple designs its products to provide very secure experiences, especially where payments are concerned. Apple has been able to provide the required level of security with tight integration of hardware, software, and services such as Apple Pay. Apple does not provide banks access to the NFC radio because doing so would undermine the security our customers expect when using Apple devices to make payments. Indeed, Android devices, which provide open access to their NFC radios to banks, have been shown to be susceptible to third party attacks that can compromise the customer's card information.¹³ There have also been reports of non-NFC security issues related to Samsung Pay,¹⁴ which is why it is so important to Apple to maintain the tight integration of our hardware, software, and services such as in Apple Pay.

Apple's stance on the NFC antenna will not prevent, and has not prevented, banks from using alternative payment technologies to give their customers alternatives payment options on iOS (see section 2.1 above for examples of alternative technologies already in use in Australia). Indeed, Commonwealth Bank of Australia has publicly observed:

"By most global standards, the capability that the Australian banking sector has generally, and Commonwealth Bank has specifically, to provide for customers is ahead of a lot of the other markets around the world where Apple has done well..."

...There is functionality associated with Apple Pay that we have had in the market for 18 months to two years".¹⁵

Competition involving alternative presentment technologies is fierce. In China, for example, QR codes have emerged as a leading mobile payment technology with hundreds of thousands of merchant locations now accepting Alipay and Wechat Pay utilizing QR codes. In the US, the Starbucks mobile app is one of the largest and most successful mobile payment schemes utilising QR codes, as does Walmart Pay. All of these alternatives are available on iOS. The applicant banks also control the majority of POS payment terminals installed in merchants in Australia and regularly update those terminals,¹⁶ so they would not face any significant barriers to integrating other technologies as an alternative means of digital contactless presentment methods if they wished to innovate and develop mobile wallets based on alternative technologies.

It has been reported in the media that, by not providing third parties access to the NFC antenna contained in Apple devices, Apple is seeking to maintain "exclusivity" and that such "exclusivity" may be anticompetitive.

¹³ <http://www.idigitaltimes.com/new-android-nfc-attack-could-steal-money-credit-cards-anytime-your-phone-near-445497>; <http://www.informationweek.com/wireless/nfc-phone-hacking-and-other-mobile-attacks/d/d-id/1105508?>

¹⁴ http://www.itnews.com.au/news/samsung-pay-wireless-magnetic-stripe-tech-can-be-skimmed-432922?utm_source=desktop&utm_medium=twitter&utm_campaign=share

¹⁵ I Narev, quoted in "\$2b fee sticking point as Apple wrangles with Australia's big four banks", Sydney Morning Herald, 17 August 2015

¹⁶ For example, Commonwealth Bank of Australia launched its new "Albert" touchscreen contactless payment terminal in April 2016

Apple's desire to protect the integrity of its own proprietary hardware installed within its own devices is not anticompetitive. It is not "exclusive dealing" conduct to which Australian competition law applies.¹⁷

What the applicant banks are seeking is the right to impose a collective boycott for the purpose of putting pressure onto Apple to grant them access to proprietary hardware and software. Apple has invested significant financial and other resources developing a simple and convenient mobile wallet service with the highest security and privacy protections available. This is also the basis on which Apple seeks to differentiate its mobile wallet from those offered by other mobile wallet providers.

Mandating access to a third party's technology is not recognised under Australian competition law. To the contrary, when evaluating the relevant public interest considerations in determining when a legislated right of access should be created, the National Competition Policy Review conducted by Professor Hilmer in 1993 concluded that access rights should be confined to major infrastructure facilities where the declaration criteria could be satisfied:

*"These criteria may be satisfied in relation to major infrastructure facilities such as electricity transmission grids, major gas pipelines, major rail-beds and ports, **but not in relation to products, production processes or most other commercial facilities**".¹⁸ [emphasis added]*

In coming to this conclusion, the Hilmer Report cited the leading US case of *Berkey Photo v Eastman Kodak Co* in which:

*"a small photographic company sought (albeit unsuccessfully) to obtain access to the products of Kodak's research and development before Kodak could market its own innovations. This case illustrates the need to ensure that the **proposed access right does not deprive investors of the fruit of risk-taking investment**".¹⁹ [emphasis added]*

4.3. Do you consider standards regarding fraud and security are important in the context of mobile payments and do you expect that collective negotiations in relation to this issue will be successful?

Apple regards security, fraud prevention, and privacy to be foundational and critical to customers trusting Apple Pay digital wallet. Apple Pay already complies with, or far exceeds, the minimum industry standards, including the Third Party Digital Wallet Security Industry Guidelines.

As banks launch Apple Pay, they can focus their fraud models on provisioning as the core ID&V process, which is a major improvement over the transaction-based fraud rules traditionally adopted by banks. Apple Pay provides a "prevention" rather than "cure" approach to card fraud.

¹⁷ The "exclusive dealing" provisions in section 47 of the *Competition and Consumer Act 2010* (Cth) prohibit conduct as between two (or more) firms by which one firm restricts the dealings of another with the purpose or effect of substantially lessening competition in a relevant market. For example, a firm will engage in exclusive dealing conduct if it acquires an input from another firm on the condition that the other firm will not supply that input to any other persons. By contrast, Apple's decision not to open up access to its own proprietary hardware is unilateral conduct that has the purpose of protecting the integrity of the Apple Pay service and Apple's own investments.

¹⁸ National Competition Policy - Report by the Independent Committee of Inquiry (August 1993), p 251 (**Hilmer Report**)

¹⁹ *ibid*

Apple does not consider that it is appropriate for a subset of banks to form a cartel and establish standards that would apply to certain third party wallet providers but would not apply to the banks themselves.

Giving the power to the applicant banks to collude to dictate a set of standards on Apple's global platform, whether in the form of identification and verification (**ID&V**) requirements or customer and transactional data exchange, will not be effective in bringing the best solutions to fraud and security concerns to the Australian market. It risks undermining the high level of privacy and security that Apple currently offers customers, by (for example) potentially obliging Apple to start collecting, storing and sharing end user data, as dictated by the banks. A "one size fits all" security protocol dictated by the applicant banks would also remove the incentive for individual competing mobile wallet providers to develop more innovative solutions to distinguish themselves from other providers.

This is not the first time that Australian banks have attempted to use fraud and security as a rationale for creating obstacles for third party wallet providers to enter and expand in Australia. Apple is concerned that, as in previous attempts, allowing the applicant banks to control the standards and conditions for third party wallets would, ironically, dramatically weaken security and increase fraud costs for merchants compared to what is being achieved through innovative solutions developed by Apple and other third party wallet providers themselves.

For example, in November 2015, the Australian Payments Clearing Association (**APCA**) (an industry group of which each of the applicant banks are members) sought to introduce a Third Party Digital Wallet Security Code that would have effectively placed APCA member banks in a position to control and dictate a set of security standards and requirements with which third party mobile wallets would need to comply but with which the banks' own mobile wallets would not. These standards and requirements, if implemented, would have weakened Apple Pay's security, for example by requiring Apple to store certain user and transactional data.

The APCA Third Party Digital Wallet Security: Card Issuer Guidelines that were subsequently published also specifies that banks should be able to elect whether or not the third party wallet uses tokens. Tokenization is a global standard used by Apple so that Apple does not need to store actual card numbers directly on our devices or on Apple servers. Electing not to use tokenization would seriously undermine the security of Apple Pay and therefore is not something to which Apple would agree.

The applicant banks' submission includes a number of grossly inaccurate and misleading claims regarding fraud involving Apple Pay that demonstrate a lack of understanding of how Apple Pay actually works.

Apple Pay is designed to allow the applicant banks themselves to continue to control the decision to ID&V cards that are added to Apple Pay, as they do today with all physical credit and debit cards. The examples of "fraud" given by the applicant banks in their submission occurred in the provisioning process, which is controlled by the applicant banks, not by Apple. In fact, the ID&V process associated with Apple Pay is a major step forward in establishing authenticated identity never before possible in the use of credit and debit cards.

For example, Apple has introduced four methods for second factor authentication on the Apple Pay platform, should banks choose to utilise them:

- One time passcode via SMS.
- One time passcode via email.
- Call center (inbound or outbound).
- Requiring customer to log into the bank's mobile banking app to complete provisioning.

Ultimately, Apple has no decision rights and does not determine the method of authentication for provisioning a card. **But Apple is not aware of a single instance to date of a credential, once correctly provisioned into Apple Pay, being breached or compromised.** If the bank deems

that the card that is attempting to be provisioned has somehow been compromised – which occurs even before it has been entered into the Apple Pay system – then the bank has the full authority and ability to deny the provisioning of the credential.

Apple partners with banks to determine the best indicators that will help the bank's decision on provisioning. Apple is able to leverage its global relationships with banks in this area and is open to input and dialogue from the Australian banks in what they believe are best practices.

Apple Pay has significantly reduced fraud in situations where the card is not physically presented to the merchant (**CNP**). These types of transactions have the highest fraud rates for merchants. For example, in 2015, Australia's rate of card fraud increased from 58.8 cents in 2014 to 66.8 cents per \$1,000 spent, driven by a 21% increase in CNP fraud. For Australian cards used domestically, CNP fraud increased by 38% to \$136.7 million with a further \$47.9m of fraud using overseas cards - a heavy financial burden on merchants, who bear the majority of these costs.²⁰

Apple also participates in standards discussions and provides regulatory input in countries where we operate Apple Pay or plan to operate Apple Pay. Apple considers that, to the extent industry standards are considered necessary, these should be developed by prominent standard setting organizations and not by a subset of banks being allowed to form a cartel to dictate standards to apply only to third party wallets.

Collective negotiation in respect of this issue is therefore unnecessary and risks leading to a suboptimal outcome, as well as a stagnation in the ongoing improvement of security and privacy protections amongst competing mobile wallet providers, to the detriment of consumers.

The arguments put by the applicants are flawed when analysed from an economic perspective. As observed by Dr Pleatsikas:

"...the CRA Report does not analyse in any rigorous fashion the efficient allocation of risk for fraud costs in the multiparty relationships that characterise four-party credit card transactions facilitated by Third Party Mobile Wallet products, such as Apple Pay.⁸⁵ Absent such an analysis of efficient allocation of risk, in my opinion it is not appropriate from an economic perspective to conclude that incentives on any one party are inadequate or that certain parties to the transaction do not bear the appropriate level of responsibility."²¹

4.4. Do you consider the ability of issuers to pass on fees imposed by third party wallet providers is important in the context of mobile payments and do you expect that collective negotiations in relation to this issue will be successful?

The arguments by the applicants in support of the passing on of fees to consumers are not economically credible and misconstrue the prior analysis of these issues by the Reserve Bank of Australia and the Commission.

It is not industry practice to pass on costs (eg the network access fees that are charged to the banks by Visa and MasterCard), to cardholders.

Collective negotiation to allow banks to charge consumers for using Apple Pay will not be likely to generate any public benefits.

Apple does not consider it to be in the public interest for banks to be able to collude for the purpose of charging consumers for using Apple Pay or other third party digital wallets.

²⁰ http://www.apca.com.au/docs/default-source/fraud-statistics/australian_payments_fraud_details_and_data_2016.pdf.

²¹ Pleatsikas Report, 24 August 2016, at [72]

Apple negotiates fees that reflect the investments made by Apple in offering Apple Pay and the benefits the applicant bank will derive from participating in Apple Pay, which are described in more detail in section 4.9 below. Apple requests banks not to pass on to consumers a fee if they elect to use Apple Pay. Customers are not currently charged transaction fees for making purchases using any other mobile wallets, including the applicant banks' own mobile wallets. Apple is trying to attract new users and does not wish to be competitively disadvantaged.

It is up to each individual bank to decide whether or not it is willing to pay the fees sought by Apple (following individual negotiations with Apple with respect to those fees) in exchange for the opportunity to offer its customers Apple Pay. If the bank is not willing to pay the fees Apple is prepared to negotiate, then the bank is free not to do so and it is able to develop alternative presentment methods for its customers. Ultimately, the market should decide whether Apple Pay is successful.

The remaining arguments put by the applicants, that ensuring that institutions have the ability to pass on the costs of third party wallets to consumers will somehow promote transparency and efficiency in the payment system and reflect long-standing Australian regulatory policy, misconstrue the prior analysis of these issues by the Reserve Bank of Australia and the Commission. These contentions are also not economically credible.

As observed by Dr Pleatsikas, "[t]he problems with this line of argument are manifold".²²

- There is no analysis in the CRA Report of the impact of interchange fee regulation on the transaction fees that might be agreed between Apple and issuing banks.
- The CRA Report does not consider the real possibility that pass through of fees to consumers could be used as a competitive tool by the banks to disadvantage Apple Pay in favour of their own mobile wallet products.
- There is no analysis in the CRA Report of the benefits provided by Apple Pay to the banks (or consumers or merchants), including any cost savings the banks (or others) might experience.
- The adoption of mobile wallets themselves are likely to result in significant efficiency benefits rather than detriments.
- A narrow focus on transaction fees alone is of little use in examining whether those fees would result in inefficient overuse of mobile wallets and ignores the possibility that recoupment by the banks of transaction fees from consumers may result in inefficient underutilisation of mobile wallet products.
- There is no relevant factual/counterfactual analysis in the CRA Report to suggest any difference in transaction fees or pass-through rates with or without authorisation of the collective bargaining/boycott conduct.
- The CRA Report misconstrues the RBA's intervention to regulate interchange fees, which the RBA did in response to what it considered a significant market failure in that four-party credit card schemes had no incentives to reduce interchange fees and the purported high level of interchange fees had a significant impact on merchant costs. No such market failure is alleged here and the solution proposed is not for any regulatory intervention to enable third parties to charge transaction fees or to regulate their magnitude but to enable the banks to form a cartel in order to attempt to negotiate lower fees and better terms from Apple.²³

Further, the fees the applicant banks say they want to charge consumers for using Apple Pay accrue to the applicant banks and are thus akin to platform access costs like the network access

²² Pleatsikas Report, 24 August 2016, at [61]

²³ Pleatsikas Report, section V.5

fees that are charged to the banks by Visa and MasterCard. Those fees are not disclosed or charged to cardholders and there are no transaction fees charged to cardholders when they use the card. Any relevant "cross-subsidisation" equally arises with respect to those fees currently charged by the applicant banks.

At section 6.3 of the applicants' submission, they argue that a restriction imposed by Apple on participating institutions from passing on the costs of using Apple Pay to consumers would be *"analogous to the credit card schemes historical prohibition on merchant surcharges for card transactions"*.

Apple's position that consumers should not have to pay to use Apple Pay is very different from the criticisms by the Reserve Bank of Australia and Financial Systems Inquiry Report of "no surcharge" rules applicable to merchants in respect of accepting credit cards, for two primary reasons:

- The credit card schemes 'no surcharge' rules applied to merchants, not to the issuer banks. The detriments identified by the Reserve Bank of Australia and the Commission, after a detailed joint study²⁴ of the credit card schemes "no surcharge" rules, were that consumers generally bore (through higher overall merchant prices) the higher costs of credit acceptance incurred by merchants despite credit cards being a higher cost payment instrument than other methods such as cash or EFTPOS. Thus, there was a problem in the true costs not being signalled, and merchants had no ability to resist those costs. Lower cost payment methods, such as cash effectively subsidized higher cost payment methods, such as credit cards. Here, there has been no such demonstration by the applicant banks, because there cannot be, that consumers would be forced to pay higher prices if the banks cannot charge consumers to use Apple Pay.
- If the applicant banks view themselves as competitors of Apple Pay, they have an incentive to favour their own mobile wallet services to consumers by charging higher fees if consumers choose Apple Pay.

4.5. Please comment on the bargaining power of the applicants

The applicant banks each individually have substantial market power and significant bargaining power with respect to key inputs necessary for Apple to compete as a mobile wallet provider in Australia.

Commonwealth Bank of Australia, National Australia Bank and Westpac Banking Corporation are three of the four biggest banks in Australia and account for 66% of the issued and available credit in Australia, 67% of total household lending, and 70% of total household deposits (based on the most recent monthly figures from APRA).²⁵ Collectively they control access to a critical mass of Australian cardholders for any mobile wallet provider in Australia.

The applicant banks are amongst the most profitable financial institutions in the world. For example, Commonwealth Bank of Australia recently unveiled a record full year profit of almost \$9.5 billion, National Australia Bank reported half-year profits of over \$3.3 billion in May 2016 and Westpac reported half-year profits of \$3.9 billion in May 2016.

The power of the applicant banks has been repeatedly identified by the Commission itself, and many other industry experts and commentators, as a source of concern:

"Australia's banking system is highly concentrated, with the four major banks using broadly

²⁴ "Debit and Credit Card Schemes in Australia A Study of Interchange Fees and Access", 2000, at [5.3]

²⁵ APRA Monthly Banking Statistics, June 2016, reissued 10 August 2016

similar business models" (p 22)

"While competition is generally adequate in the financial system at present, the high concentration and steadily increasing vertical integration in some sectors has the potential to limit the benefits of competition in the future." (p 255)

Financial System Inquiry Report, 10 December 2014

"The number of providers operating in the market obscures the fact that the Australian credit card market is dominated by banks, and in particular the four 'majors' (the CBA, Westpac, ANZ and NAB, and their subsidiaries). The ABA informed the committee that banks provide approximately 88 per cent of credit cards on issue in Australia, and account for approximately 81 per cent of balances outstanding. The four majors alone account for about 68 per cent of balances outstanding."

Senate Economics References Committee Report into Interest rates and informed choice in the Australian credit card market, December 2015

4.6. Please comment on the bargaining power of Apple

Given the very recent and limited launch of Apple Pay in Australia, Apple could not be said to have any significant presence or power in the banking sector or any individual service offered in that sector.

Consumer preference in smartphones is dynamic and can change rapidly over short periods of time. Apple currently competes for consumer preference in Australia not only against Samsung and other Android-enabled devices, but also a large number of multinational device manufacturers, such as Sony, HTC, Blackberry, Motorola and Huawei.

Popularity in terms of consumer preference does not equate to substantial bargaining power for Apple that it could seek to leverage against the applicant banks given that the banks control a necessary input that Apple needs in order to offer Apple Pay to customers.

Apple is a new entrant and faces significant competitive constraints from both existing providers of card presentment services and other emerging mobile wallet providers. The use of plastic cards continues to account for the vast preponderance of transactions made by consumers using credit and debit cards in Australia.

Section 4 of the applicants' submission describes the numerous existing mobile payment and mobile wallet providers in Australia with which Apple Pay must compete to win over customers. Every major Australian bank has a mobile banking app on iPhone and iPad and they are top listings in the financial apps for iPhone and iPad. Additionally, in response to question 4.2, Apple identified many specific mobile apps that have had great success in iOS.

The applicant banks focus on Apple as a manufacturer of smartphones. While the iPhone is currently one of the more popular smartphones in terms of consumer preference, the strength of those preferences does not equate to substantial bargaining power for Apple that it could seek to leverage against the banks, particularly when Apple already makes iOS available to any third-party offering mobile payment applications.

Apple competes in Australia not only with Samsung and other Android-enabled devices which occupy a much larger market share than iPhone, but also a large number of multinational device manufacturers, such as Sony, HTC, Blackberry, Motorola and Huawei. The applicant banks' fail to acknowledge that, unlike the retail banking industry, the shares of any given smartphone

manufacturer at any given time is highly volatile and has changed, sometimes dramatically, within very short spaces of time.

The basis on which the applicant banks assert that Third Party Wallet Providers have significant bargaining power is economically flawed. As observed by Dr Pleatsikas in his attached report:

*"As noted above in Section V.3.2, brands are not normally viewed as separate markets by economists. Consequently, the view that a brand owner has a "monopoly" in relation to buyers of its brand is not generally appropriate from an economic perspective. That is particularly true in the case of brands of smartphones (like iPhones) because many consumers replace their smartphones at regular intervals and, according to statistics cited in the CRA Report, a significant fraction of buyers switch operating systems when they purchase new smartphones."*²⁶

...

*The market power analysis in the CRA Report also does not acknowledge the significant constraints facing Apple in the marketplace. In mobile wallet products, Apple faces many significant competitors, including banks, Android Pay and Samsung Pay. Apple cannot simply rest on its laurels, but must continue to innovate and improve its products (i.e., compete vigorously) to meet the challenge."*²⁷

4.7. Please comment on the proposed collective boycott conduct

The most likely result of the proposed collective boycott would be to delay the offer of Apple Pay to millions of Australian cardholders until the expiry of the 3 year authorisation period.

With 66% of Australian cardholders precluded from having the opportunity to use Apple's innovative Apple Pay mobile wallet throughout the authorised 3 year period, the impetus to innovate and develop innovative new mobile wallets will be substantially reduced.

Boycotts among competitors are hard-core cartels and a civil and criminal breach of the *Competition and Consumer Act* for good reason. This conduct is of the most pernicious kind outlawed by the competition laws of more than 180 jurisdictions which have adopted competition law systems. A collective boycott of the kind proposed by the applicant banks will slow innovation and reduce choices by protecting the applicant banks from competition with each other for the next three years while negotiations, which each of the applicant banks have sought to stall individually during the past two years, are ongoing.

The applicant banks would have little incentive to agree terms with Apple in an efficient manner, even if their customers wanted it, knowing that they are each constrained from breaking ranks to agree terms with Apple during the course of negotiations.

As observed by Dr Pleatsikas in his attached report:

"...if the strategic interests of the cartel members are not sufficiently aligned, the combination of cooperative negotiation and a collective boycott could prevent any agreement between the Applicants and Apple (assuming that any agreement was even possible under the circumstances) or might result in an agreement that some of the cartel members would view as suboptimal. In other words, the collective boycott

²⁶ CRA Report, paragraph 67.

²⁷ Pleatsikas Report, 24 August 2016, at [55] and [56]

element of the conduct proposed to be authorised would, all else equal, promote hold-up behaviour among the cartel members".²⁸

In the rare occasions that the Commission has previously considered applications for authorisation of collective boycott conduct, these have generally involved small business applicants (as distinct from Australia's biggest banks) and are put by the applicants in those matters on the basis that the relevant counterparty could otherwise exercise market power in negotiations. Those applications provide no support for a group of competitors (the applicant banks) wishing to boycott another new and emerging market entrant or perceived competitor (third party mobile wallet providers).

Any applicant faces serious difficulties justifying such conduct on public interest grounds given the Tribunal's stated views that concerns about transient or short term opportunistic negotiating by a counterparty with market power are not sufficient to justify collective bargaining or a collective boycott.²⁹ It is particularly implausible in the current circumstances where the applicant banks include three of the four largest banks in Australia which are amongst the most profitable institutions in the world.

In the *VFF Chicken Growers application for approval to collectively boycott*,³⁰ the Tribunal refused to authorise collective bargaining and collective boycotts by small business chicken growers in their negotiations with large chicken processors, despite there being a disparity in bargaining power and some evidence of market power being exercised by the large processors (which is the opposite situation here since the applicant banks are the ones with the disparate amount of bargaining power). But even in the *VFF Chicken Growers* matter, while the Tribunal accepted there was some evidence that the large processors had acted opportunistically to impose terms and conditions of supply on growers which were economically inefficient and a public detriment, the Tribunal found this detriment was short term and likely to be overcome by the processors' own demands for supply. Consequently, the Tribunal found the detriment raised by the Applicants was transient.

It is also highly unlikely that a boycott in this case would achieve any market outcome which could justify it being authorised. Apple submits that, in the absence of the collective boycott and collective bargaining, each of the applicant banks already exerts greater bargaining power in the relevant market than Apple. The commercial positions that Apple has adopted to date would not be affected by the imposition of a boycott or the authorisation of collective bargaining in the banks' negotiations with Apple - all that it would achieve is to delay the availability of Apple Pay to the large majority of Australian cardholders.

4.8. To what extent do other providers of digital wallets constrain Apple / Apple Pay?

Apple faces particularly fierce competition from other device manufacturers who have also developed mobile wallet offerings and continue to improve those offerings in direct competition with Apple. It is likely that the banks, card network operators and any other interested parties will develop their own alternative mobile wallet and other mobile payment solutions to compete with Apple Pay.

4.9. The applicants submit that transaction fees for Apple Pay overseas are in the vicinity of 0.07% and 0.25%. Please comment on the size of these fees.

Apple maintains relatively consistent fee structures within similar categories of countries that reflect the particular circumstances of the market which Apple Pay is entering.

Apple's philosophy with respect to Apple Pay related fees are that Apple Pay helps create broader digital engagement with consumers and their banks. The Apple Pay platform provides

²⁸ Pleatsikas Report, 24 August 2016, at [24]

²⁹ *Re VFF Boycott Application* (2006) ATPR 42-0120

³⁰ *Re VFF Boycott Application* (2006) ATPR 42-0120

several capabilities beyond payments that the banks can use to drive more mobile banking downloads, increase mobile banking usage by deep linking into the apps and reduce service calls by messaging customers more proactively through front of pass messaging and notifications capabilities. Banks broadly reap many benefits from increased digital engagement with their customers, enabling both increased revenue as well as lower costs. Apple has invested deeply in new security, NFC radio and software capabilities to enable new forms of mobile payment and the banks on the Apple Pay platform share in that value creation with Apple.

In every case, including Amex and ANZ in Australia, fees payable by card issuers to Apple have been arrived at following normal bilateral negotiation process agreed to by banks who recognise the value that Apple Pay adds to their services to their cardholders, and an increase in security of transactions which reduces fraud risk borne by the banks or cardholders.

4.10. Please provide any other comments regarding the public benefits and public detriments claimed by the applicants or other public benefits and public detriments arising from the collective bargaining/boycott

For the reasons set out in detail above and in the accompanying report from Dr Pleatsikas, Apple is firmly of the view that:

- The proposed collective bargaining/boycott will not ultimately result in any changes to the ultimate outcome of negotiations as between Apple and the applicant banks;
- Conversely, the proposed collective bargaining/boycott will lead to significant consumer harm by delaying the expansion of Apple Pay in Australia and stifling the resulting increase in competition and innovation amongst both banks and third party mobile wallet providers that would flow from the increased consumer demand for security, privacy and convenience in payments generated by the introduction of Apple Pay to greater numbers of Australian cardholders; and
- Were the proposed collective bargaining/boycott to result in Apple agreeing to the terms that the applicant banks would likely seek to dictate (which Apple denies would be the case), this would result in:
 - Less secure mobile payments in Australia;
 - Less privacy in mobile payments in Australia;
 - Less convenience in mobile payments in Australia;
 - Higher costs of mobile payments in Australia; and
 - Significantly lower rates of innovation in mobile payments in Australia.

5. Period of authorisation

5.1. The applicants have sought authorisation for a period of three years. Please provide any comments on the period of authorisation.

Apple considers that any period of authorisation will substantially lessen competition in the markets for payment services and retail banking services and lead to significant consumer harm for the reasons set out above. The fact that the applicant banks have requested a three year period of authorisation, which is well-beyond the period of time that it would take two sides to agree (or not agree) to terms suggests that the applicant banks are primarily focused on erecting barriers for Apple Pay, and other third-party wallet providers, becoming available to Australian consumers.

In any event, the extent of consumer harm will increase as the period of authorisation is increased and would not cease upon the expiry of the authorisation period.

As observed by Dr Pleatsikas in his attached report:

"Moreover, even though the proposed cartel is of limited duration, the ill-effects of the cartel could persist beyond the period of its existence.⁹⁹ The chances for harm are increased, in my opinion, when, as in this case, one objective of the cartel is to alter a long-standing competitive strategy (i.e., a proprietary ecosystem) by one of the main competitors in the marketplaces for both mobile wallets and smartphones."³¹

6. Conclusion

The applicant banks have failed to justify, by means of compelling evidence, that the public benefit outweighs the detriment of the highly anti-competitive conduct in which they propose to engage.


There is no realistic prospect of the public benefits that the applicant banks argue would arise from the cartel conduct actually materializing if authorisation was granted by the Commission.

There is a complete lack of any objective corroborating evidence of any such public benefit presented by the applicant banks in support of their application.

By contrast, as detailed in this submission and its supporting evidence, the cartel conduct for which the applicant banks seek the Commission's endorsement has the potential to be highly damaging to consumers' interests even if it does nothing other than delay the introduction of Apple Pay and other mobile wallets in Australia. It thereby allows the applicant banks to entrench control over their cardholders by means of their own proprietary mobile wallets insulated from the effects of competition from third party wallets.

Apple submits that for the reasons given in this submission and the accompanying report by Dr Pleatsikas, the application for authorisation should be rejected.

³¹ Pleatsikas Report, 24 August 2016, at [84]



AN ANALYSIS OF THE CRA REPORT ON “COLLECTIVE NEGOTIATION BY ISSUERS WITH MOBILE WALLET PROVIDERS”

By Christopher Pleatsikas

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I. Qualifications

1. I, Christopher Jon Pleatsikas, am an economist, living in Santa Cruz, California. I have been a Managing Director at Berkeley Research Group and LECG, LLC, both global economics and business strategy consulting firms. I received a Ph.D. in Regional Economic Analysis from the University of Pennsylvania and specialise in antitrust (competition) analysis. My qualifications are set forth in more detail in Attachment A to this report.
2. This report is organised as follows. Section II discusses my assignment in this matter. Section III presents an Executive Summary of my Results. Section IV presents some general background information on mobile wallets and the conduct the Applicants propose to authorise. Section V discusses significant problems with the CRA Report.

II. Assignment

3. Apple Pty, Ltd., has asked me to provide comments on the CRA Report, “Collective Negotiation by Issuers with Mobile Wallet Providers: Economic Assessment of the Benefits and Detriments,”¹ which is appended to the submission to the Australian Competition and Consumer Commission (ACCC) “Application for authorisation of limited collective negotiation in relation to mobile wallet and mobile payment systems.”²
4. In this report I utilise, only for the limited purpose of providing comments on the CRA Report, certain facts and information that I specifically mention from that report (and from the Authorisation Application to which it is appended). The utilisation of this information is not meant to imply that I endorse or in any manner attest to the accuracy, reliability or truth of any such facts or information.

III. Executive Summary

5. The CRA Report maintains that authorisation of a cartel of issuing banks (including both authorisation of collective negotiation and a collective boycott, the latter to prevent the members of the cartel from breaking ranks and negotiating individually) to enable them to negotiate collectively with Third Party Mobile Wallet suppliers, including with Apple for Apple Pay, would produce an outcome in which the competitive benefits would outweigh any competitive detriments. In my opinion, the conclusions in the CRA Report on the purported net benefits of the conduct the issuing banks seek to authorise are not supported by a sound economic analysis and are unreliable as a matter of economics. In my opinion it is much more likely that the net benefits of such conduct would be negative and probably significantly negative, particularly because the issuing banks that seek to authorise the cartel conduct provide mobile wallet products to end consumers and in that sense are in competition with Third Party Mobile Wallet suppliers that also seek to provide mobile wallet products to end consumers.
6. Other conclusions I reach in my analysis are as follows:
 - a. The proposed conduct would provide an advantage to one set of competitors (the issuing banks) at the expense of another set of competitors (Third Party Mobile Wallet suppliers) in the marketplace for mobile wallet products. This would likely have negative implications for both competition and dynamic efficiency. Since dynamic efficiency is, over the long run, the major source of efficiency benefits in an economy, a negative impact on dynamic efficiency could have significant (and negative) economic consequences.

¹ Charles River Associates, “Collective Negotiation by Issuers with Mobile Wallet Providers: Economic Assessment of the Benefits and Detriments,” by Dr. Geoff Edwards, 25 July 2016 (hereinafter referred to as “CRA Report”).

² “Application for authorisation of limited collective negotiation in relation to mobile wallet and mobile payment systems,” by Gilbert + Tobin, 25 July 2016 (hereinafter referred to as “Authorisation Application”).

- b. There is no apparent economic analysis in the CRA Report with the exception of the prisoners’ dilemma example (which in my opinion is inapplicable in these circumstances). Instead of citing to the economic literature or applying economic theory and principles to evaluate economic effects, the CRA Report appears to consist of a compilation of information from news media sources, press releases, third party market research reports and websites, largely organised to support the asserted proposition that banks negotiating individually with Apple for the Apple Pay mobile wallet product would be at a disadvantage in terms of bargaining power (in part because Apple ecosystem includes superior products that have achieved considerable success in the marketplace).
- c. There is no apparent identification of the relevant market (or relevant markets) in the CRA Report. The narrative in that Report shifts among smartphones, mobile wallets, banking, payment instruments and technology (e.g., QR codes and NFC chips) in a fluid manner, without any apparent pattern that could lead one to identify what relevant market (or markets), if any, is (are) being proposed for impact analysis. To the extent that the CRA Report focuses on any product category, the emphasis is on smartphones rather than the mobile wallet product that is the focus of the Authorisation Application. Moreover, at least as the Report considers smartphones, it draws an incorrect inference in relation to the substitutability of iOS phones with Android phones, concluding that they are poor substitutes, despite citing empirical data that suggest the opposite conclusion.
- d. There is no analysis of market power in the CRA Report, which appears to conflate the concepts of market power and bargaining power and appears to misinterpret the competitive implications of a reputation for supplying superior products, branding and differentiation. Indeed, the CRA Report appears to suggest that brands can be the basis for both market boundaries and market power despite the fact that brands are not normally viewed as separate markets by economists. Consequently, the view that a brand owner has a “monopoly” in relation to buyers of its brand is not generally appropriate from an economic perspective in assessing market power.
- e. The CRA Report also appears to suggest that the use of a proprietary system is anticompetitive. In real world markets firms pursue different strategies and sometimes use open systems and sometime proprietary systems to compete. In addition, the CRA Report does not rigorously evaluate the marketplace constraints on Apple in any market.
- f. The CRA Report utilises an unsound concept of pricing efficiency. For example, the CRA Report concludes that charging transaction fees and prohibitions on pass-through of those fees would automatically distort competition in the provision of mobile wallet services. However, the CRA Report does not evaluate the impact of interchange fee regulation by the Reserve Bank on the magnitude of any transaction fees that might be agreed. Also, the CRA Report does not evaluate the costs savings

and other benefits to banks (or any other party) from Third Party Mobile Wallet products or the competitive implications of enabling banks to charge transaction fees to consumers for Third Party Mobile Wallet products but not for their (the banks’) own mobile wallet products. Absent such an analysis there is no way to determine whether and to what extent, if any, any agreed transaction fees would be or could be “excessive” or would or could practically distort competition.

- g. The CRA Report does not consider alternative, less restrictive (and potentially efficiency enhancing) means for achieving at least some of the objectives of the proposed conduct, such as developing security standards using the inclusive model developed by Standard Setting Organizations.
- h. The CRA Report utilises an unsound analysis of competition and competitive benefits. For example, the CRA Report appears to assume, without analysis, the banks will be unable to compete with Third Party Mobile Wallet products unless the banks can access the embedded NFC chips in smartphones even though alternative technologies exist to enable them to do so. The CRA Report also does not consider the efficiency benefits of product standardisation and the disbenefits that can be associated with marketplace fragmentation in terms of the number of products available and the extent of their differentiation.
- i. The CRA Report asserts that the so-called prisoners’ dilemma is an apt analogy to demonstrate the benefits of cartelisation in this circumstance. However, highly simplified games such as the prisoners’ dilemma game are unsuited to provide insight into the competitive consequences of conduct in complex marketplace situations. In particular, the conditions in the marketplace for mobile wallet products are both complex and deviate significantly in many important respects from assumed conditions that characterise the prisoners’ dilemma game. Consequently, the outcome of the prisoners’ dilemma game is not a useful guide to beneficial marketplace outcomes.
- j. While the CRA Report concludes that the conduct proposed for authorisation will produce net benefits compared with the factual, this conclusion appears to be based on assertion rather than economic analysis. To the contrary, the outcome if the cartel conduct were to be authorised there would likely be net detriments (probably significant net detriments) compared with the counterfactual. There are many reasons to support this view of net detriments, one of which is the fact that there are two factual alternatives considered in the CRA Report, not one. Both the First Factual and the Second Factual likely have net detriments compared with the counterfactual. Those net detriments would likely be particularly large in the case of the Second Factual. Also, the CRA Report appears to overestimate any potential for benefits (particularly because the proposed conduct would authorise a cartel of banks that provide mobile wallet products and that would be able to act against third parties that provide competitive mobile wallet products). Finally, the CRA Report

does not consider some categories of detriment, also tending to lead to an erroneous conclusion that there would be net benefits from the proposed conduct.

IV. Background on Mobile Wallets and the Authorisation Application

7. The Authorisation Application defines a mobile payment as a “payment or transfer of money initiated on a mobile device such as a mobile phone or tablet.”³ The Authorisation Application defines a mobile wallet as “smartphone application or service that facilitates mobile payments and may also store other valuable information ...”⁴ With the caveats that there is no reason to confine the definition of a mobile wallet to smartphone applications (e.g., a mobile wallet could also be provided as an application to a smart watch or other mobile device) and that the information contained in a mobile wallet may be valuable or not, I will utilise these definitions in this report.
8. Both the Authorisation Application⁵ and the CRA Report⁶ contain extensive discussions further clarifying the terms “mobile payment” and “mobile wallet”. I do not intend to repeat those discussions here and, for the purposes of my report (with the exceptions of the caveats noted above), I utilise these discussions in terms of identifying and providing at least partial descriptions of at least some mobile payment types and some mobile wallet products. From those discussions, it is clear that the banks seeking authorisation provide and/or plan to provide mobile payment systems and mobile wallet products to consumers. In this sense these banks are competitors and/or potential competitors to firms like Apple, Google and Samsung, which provide so-called Third Party Mobile Wallet products.⁷ It is my understanding that one objective of the Authorisation Application is to affect negotiations between applicant banks and Third Party Mobile Wallet product providers – and, in particular, Apple⁸ – in order to gain access to the embedded NFC chips in smartphones for use by their own (i.e., the banks’ own) mobile wallet products, although there are other negotiation issues that would be affected as well (and which are noted in a subsequent paragraph).

³ Authorisation Application, page 16.

⁴ Authorisation Application, page 17.

⁵ See Authorisation Application, Section 3, pages 16-23.

⁶ CRA Report, Section 2, pages 4-8, paragraphs 16-33.

⁷ Apple (Apply Pay), Google (Android Pay) and Samsung (Samsung Pay) are designated as “third party” providers of these products because they are not part of the set of parties that are involved in traditional physical card transactions (see the difference between the parties involved in a four-party credit card transaction in the Figure on page 20 of the Authorisation Application and the parties to a four-party scheme transaction facilitated by a mobile wallet product on page 21 of the Authorisation Application). According to a separate definition of Third Party Mobile Wallet providers, these third parties are neither issuers nor card schemes and can provide products that are capable of storing payment instruments from more than one issuer (see CRA Report, paragraphs 25-26).

⁸ E.g., CRA Report, paragraph 42.

9. In general, mobile wallet products are viewed in the payments industry as a significant technological innovation that will change the way that at least many and probably most consumers, merchants, banks and card schemes will utilise payment instruments. A significant shift to mobile wallet products is expected to occur within a relatively short period of time. In the parlance of dynamic competition, mobile wallet products are viewed as a paradigm shift⁹ that will fundamentally alter (and/or disrupt) the character of the payment instruments industry.
10. The CRA Report has described the Authorisation Application in the following terms:
 - a. The Applicants are seeking authorisation to collectively negotiate with Third Party Mobile Wallet providers such as Apple on matters related to exclusivity¹⁰ for Third Party Mobile Wallets on particular mobile devices and restrictions on pass-through (i.e., whether any transaction fees for use of Third Party Mobile Wallet products may be passed through in some manner to consumers by the Applicants). The Applicants also seek authorisation to negotiate collectively with respect to security standards.¹¹
 - b. The Applicants are also seeking authorisation for a collective boycott of individual negotiations (while collective negotiation is occurring). The collective boycott is an important complement to the application for authorisation of collective negotiation. In other words, for the purposes of the Authorisation Application, the collective negotiation and the collective boycott necessarily go together. Without authorisation of a parallel collective boycott, the purpose and potential benefits of authorisation of collective negotiation would be undermined according to the Applicants. This is because, as just mentioned, the Applicants hope that collective negotiation will alter the relative bargaining positions between the Applicants and Apple (and other providers of Third Party Mobile Wallet products), but if a corresponding collective boycott is not also authorised, there will, according to the Applicants, remain scope for parallel individual negotiations, and bargaining positions between the Applicants and Third Party Mobile Wallet product suppliers would be unchanged from the counterfactual. In short, according to the Applicants, without both collective bargaining and a collective boycott, the ability to engage in collective negotiation would have little meaning because it could be undermined by each of the Applicants negotiating separately with providers of Third Party Mobile Wallet products.¹²
11. The Applicants are Commonwealth Bank of Australia, Westpac Banking Corporation, National Australia Bank and Bendigo and Adelaide Bank, although the Applicants would

⁹ C. Pleatsikas and D. Teece, “New Indicia for Antitrust Analysis in Markets Experiencing Rapid Innovation,” in J. Ellig (ed.), *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, Cambridge University Press, 2000.

¹⁰ Generally, in antitrust/competition analysis, the term “exclusive” (or “exclusivity”) refers to a vertical relationship. In the context of the Authorisation Application and the CRA Report, it appears to refer to access to a component in an integrated, finished product (e.g., the NFC chip embedded within an iPhone). While I use the term in this report as it is used in the Authorisation Application and the CRA Report, I note that this is not consistent with the way the term is generally used in antitrust/competition analysis.

¹¹ CRA Report, paragraph 34.

¹² CRA Report, paragraph 40.

allow other issuing banks to join the collective group if other issuing banks chose to do so. The Applicants claim the authorisation would be limited to exclusivity, pass-through and security considerations and that other topics, such as pricing, would not be subject to the collective negotiation or collective boycott.¹³ However, given that the collective negotiations are presumably meant to lead to contracts, and the deal represented by a contract should be viewed, from an economic perspective, in its entirety,¹⁴ not as a set of independent provisions, it seems unrealistic (again, from an economic perspective) to expect that collective negotiations (and a collective boycott) aimed at a subset of issues would have no effect on other issues, such as pricing, particularly because pass-through (and even exclusivity) may have a close relationship to pricing.

IV.1 Rationale for Application¹⁵

12. While the proposed authorised conduct would enable the Applicants (and any other issuing banks that joined the Applicants under the authorisation) to negotiate with any Third Party Mobile Wallet provider on the issues designated, the proposed authorised conduct is mainly concerned with negotiations with Apple over access for their (the issuing banks’) mobile wallet products to the NFC chip embedded in Apple smartphones. The Applicants assert that, absent the proposed authorised conduct, Apple’s policy of exclusivity over access to its iPhone NFC chips would result in a significant competitive disadvantage to the Applicants, as they claim they will not be able to compete to provide mobile wallet products to iPhone users (i.e., against the Apple Pay mobile wallet product – see also next paragraph). The Applicants also maintain that, in the absence of the proposed authorised conduct, Apple will be able to impose excessive transaction fees for Apple Pay transactions, prevent the banks from recovering any of these fees from consumers (i.e., preclude pass-through) and thereby encourage inefficient over-usage of Apple Pay. That is, according to the Applicants’ claims, because the Applicants will be unable to pass-through (any or all of) these transaction fees to consumers, consumers will, in turn, not receive appropriate price signals when they (consumers) use the Apple Pay product and will, consequently, tend to overuse it. Finally, the Applicants claim that, in the absence of coordinated negotiation over security standards, there will be insufficient incentives for Third Party Mobile Wallet suppliers to ensure that their products incorporate sufficient security safeguards to minimise fraud.¹⁶
13. In addition, the Applicants claim that the authorised conduct will promote both competition and innovation by requiring Apple to allow non-Apple mobile wallet applications to access the NFC chips embedded within Apple smartphones. Access to Apple iPhone NFC chips is purported to be important because, as the Applicants maintain, Apple’s large share of the

¹³ CRA Report, paragraph 35.

¹⁴ C. Pleatsikas and D. Teece, “The Competitive Assessment of Vertical Long-Term Contracts,” *Australian Business Law Review* 29, 2001, 454

¹⁵ CRA Report, paragraphs 34-40. Section IV.1 merely refers to information contained in the CRA Report to provide background for my comments in Section V below. I do not intend reference to this information as endorsement or adoption of any of the positions taken in the CRA Report (or the Authorisation Application).

¹⁶ CRA Report, paragraphs 36-39.

smartphone marketplace, its insistence on proprietary access for the Apple Pay product to the NFC chip embedded within iOS phones, its premium image and the higher income and wealth profile of its user base would make it much more difficult for other mobile wallet product suppliers (including the banks, with their own mobile wallet products) to compete against Apple. The bank Applicants essentially maintain that Apple is a monopolist in relation to users of iPhones and that banks have little or no leverage in negotiations with Apple to provide banking mobile wallet products to iPhone users and that the banks’ mobile wallet products will be unable to compete against Apple Pay for their (the banks’) customers that have iPhones.

IV.2 CRA’s Analysis of Impact¹⁷

14. The counterfactual utilised in the CRA Report is that Apple is unconstrained in its negotiations with banks to provide the Apple Pay Third Party Mobile Wallet product and that each bank negotiates individually with Apple and other Third Party Mobile Wallet suppliers. The asserted result will be that Apple will retain its exclusivity in access to the iPhone NFC chips, and competitors purportedly would be significantly handicapped (or even practically unable to compete at all) in their attempts to offer competitive mobile wallet products. As a result, the Applicants (and CRA) maintain that consumer choice, competition and innovation in mobile wallet products will be harmed. In addition in the counterfactual, according to the CRA Report, Apple may demand excessive transaction fees for use of Apple Pay, and the banks would be unable to charge consumers a price that would reflect these fees, with the result that prices for use of Apple Pay would be inefficient and there would be inefficient over-use of the product.¹⁸ Finally, the CRA Report implies that Apple Pay products (and possibly other Third Party Mobile Wallet products as well) may be less secure than the banks’ mobile wallet products with the result that there may be increased fraud associated with use of Apple Pay (and possibly other Third Party Mobile Wallet products as well).¹⁹
15. One factual alternative utilised in the CRA Report contemplates authorisation of the proposed conduct, in which case Apple may agree to waive or in some manner modify (“relax”) its exclusivity.²⁰ If this were to occur, according to the CRA Report, the result would be to increase competition (e.g., by enabling the banks’ own mobile wallet products to access the embedded NFC chip in iPhones), to reduce or eliminate any potential excessive transaction fees and/or increase the likelihood that banks would be allowed to pass-through some or all of any such fees to consumers (Apple would “waive or relax” its insistence on

¹⁷ CRA Report, paragraphs 91-150. As with Section IV.1, Section IV.2 merely refers to information contained in the CRA Report to provide background for my comments in Section V below. I do not intend reference to this information as endorsement or adoption of any of the positions taken in the CRA Report (or the Authorisation Application).

¹⁸ The CRA Report does not demonstrate that prices would be inefficient. It only suggests that this may be possible. See CRA Report, footnote 56.

¹⁹ CRA Report, paragraphs 41-53 and 84-85.

²⁰ CRA Report, paragraphs 4, 37, 77, 85, 88, 91, 108, 117, 123, 131-133, 136-137, 140, 144-145, 165 and 171.

exclusivity and its insistence on restrictions on “pass-through”).²¹ Alternatively, in the second factual alternative, the proposed conduct would be authorised but an agreement will not be reached between the Applicants and Apple during the authorisation period (3 years), and the Applicants would presumably then be free to negotiate individually with Apple for access to the Apple Pay product.²²

16. The asserted benefits of the conduct that the Applicants propose should be authorised are as follows:

- a. Greater choice for iOS users;²³
- b. Greater migration of payments from cash and physical cards to mobile wallets;²⁴
- c. Greater competition leading to lower prices and higher quality,²⁵
- d. Lower fees charged by Apple;²⁶
- e. Greater mobile wallet innovation and investment by issuers and third parties.²⁷

17. The competitive detriments identified in the CRA Report are:

- a. Potential loss of public benefits associated with exclusivity, including:
 - i. impacts on Apple’s investment incentives,
 - ii. impacts on consumer search costs,
 - iii. potential compatibility costs, and
 - iv. potential quality assurance issues.²⁸

18. While none of the purported benefits or detriments is in any manner quantified, the CRA Report claims that the benefits of the factual would significantly outweigh the detriments.²⁹

²¹ CRA Report, paragraphs 5, 155, 160 and 166.

²² CRA Report, paragraphs 86-90.

²³ CRA Report, paragraphs 92-94.

²⁴ CRA Report, paragraphs 95-107.

²⁵ CRA Report, paragraphs 108-114.

²⁶ CRA Report, paragraphs 115-123.

²⁷ CRA Report, paragraphs 124-131. Note that this alleged “benefit” somewhat duplicates some of the other categories of benefits identified in the CRA Report (e.g., “higher quality” and “greater competition”, as higher investment per se is not an efficiency benefit, but only to the extent that it provides other benefits, such as higher quality). In some circumstances, particularly if the proposed conduct made duplicative investment in mobile wallets more likely, increased investment could result in lower efficiency (e.g., see G. Comanor, K. George, A. Jacquemin, F. Jenny, E. Katzenbach, J. Ordover, and L. Waverman, *Competition Policy in Europe and North America: Economic Issues and Institutions*, Routledge, London, 2001, p. 217; and M. Brouwer, *Schumpeterian Puzzles: Technological Competition and Economic Evolution*, University of Michigan Press, Ann Arbor, 1991, p. 87).

²⁸ CRA Report, paragraphs 133-144.

²⁹ E.g., CRA Report, paragraphs 165-169.

V. Major Problems with the CRA Analysis

19. While I have identified many problems with the analysis of benefits and detriments in the CRA Report of the proposed conduct for which the Applicants seek authorisation, I comment in this section only on the most serious problems.

V.1 The Proposed Conduct Would Advantage One Set of Competitors at the Expense of Other Competitors

20. Economists recognise three types of efficiency in evaluating economic performance.³⁰ Allocative efficiency measures how well an economy distributes goods and services. Productive efficiency measures how well inputs are combined to produce goods and services (i.e., whether and to what extent output is produced at minimum cost). Dynamic efficiency measures how well the economy adapts over time to new technology,³¹ and whether pricing or policies “today” provide the right signals and incentives for firms to optimally allocate resources in the future. Over the long run, because dynamic efficiency is most powerful force for delivering economic benefits, it is an important consideration for economic policy analysis.³²
21. Dynamic efficiency gains can be derived from gradual changes in technology that allow consumers and businesses to adapt gradually (over time) or they can entail abrupt, disruptive changes. Disruptive innovations (sometimes referred to as paradigm shifts) may result in profound and rapid changes in the way businesses operate and in what consumers purchase. These types of innovations hold the promise of providing substantial economic benefits. However, because such changes are both profound and rapid, they often present significant challenges to businesses used to operating in more traditional ways. In other words, disruptive innovations present both threats and opportunities to existing businesses and opportunities for entrants (e.g., providers of Third Party Mobile Wallet products) to thrive. Those firms that adapt readily and rapidly will, all else equal, find more success than those that do not.
22. Mobile wallets are a disruptive, innovative technology that will likely profoundly change the way in which many payments are made and accepted. Both banks and third party vendors,

³⁰ For a detailed discussion of these three types of economic efficiencies, see M. Motta (2009), *Competition Policy: Theory and Practice* (Cambridge University Press) at Chapter 2.2 (“Allocative Efficiency”), pp. 40-45; Chapter 2.3 (“Productive Efficiency”), pp. 45-55; and Chapter 2.4 (“Dynamic Efficiency”), pp. 55-64.

³¹ Id., pp. 55-56.

³² See, e.g., D. Waldman and E. Jensen (2013), *Industrial Organization: Theory and Practice* (Pearson), p. 7 (“Dynamic efficiency requires an optimal rate of technical advance ... Courses in industrial organization tend to place considerable emphasis on dynamic models and dynamic efficiency. Most economists recognize that even if an industry achieves static efficiency, its performance may be poor if it fails to invest in research and development at an optimal rate.”); H. Wellford, “Antitrust Issues in Standard Setting,” Antitrust Division, U.S. Department of Justice, March 29, 2007, available at <https://www.justice.gov/atr/speech/antitrust-issues-standard-setting> (“dynamic efficiency, which refers to gains caused by new technologies and other significant innovations, is responsible for the vast majority of economic growth and increased consumer welfare.”)

such as Apple and Android, have recognised the potential benefits of mobile wallet technology and have sought to introduce mobile wallet products.

23. Stripped to its bare essential elements, the conduct the Applicants propose for authorisation amounts to cooperation among certain mobile wallet suppliers (i.e., certain issuing banks, which are competitors with preferred access to consumers' financial records and assets) in order to exercise greater market/bargaining power against certain other mobile wallet suppliers, namely Third Party Mobile Wallet product providers. One Third Party Mobile Wallet provider in particular is targeted by the proposed conduct – namely Apple.
24. There is of course ample economic evidence that forming a cartel (e.g., by authorising certain competitors to cooperate explicitly) tips the bargaining and market power balance in favour of the cartel members, as long as the cartel operates effectively (e.g., as long as cartel members cooperate and none engages in behaviour that undermines the objectives and efficacy of the cartel). Ensuring the effective operation of the planned cartel is the reason that the proposed authorised conduct includes not only collective bargaining among the Applicants (and any other banks that may decide to join the Applicants), but also includes a collective boycott. The collective boycott would ensure that no member of the cartel defects and undermines the cartel. One problem with a collective boycott in this circumstance is that, if the strategic interests of the cartel members are not sufficiently aligned, the combination of cooperative negotiation and a collective boycott could prevent any agreement between the Applicants and Apple (assuming that any agreement was even possible under the circumstances) or might result in an agreement that some of the cartel members would view as suboptimal. In other words, the collective boycott element of the conduct proposed to be authorised would, all else equal, promote hold-up behaviour among the cartel members.
25. Another problem with a collective boycott is that, because the members of the proposed cartel are competitors to Apple in the sense that the banks provide rival mobile wallet products (as well as accounting for a large share of credit card issuing and consumer financial assets), delay in facilitating access to consumers for Apple Pay may be in their collective self-interest (so that they could promote their own mobile wallet products more effectively and prevent Apple Pay from accessing a large share of the potential customer base for the Apple Pay product). A collective boycott would help the Applicants to coordinate such a delay.
26. It is highly problematic, in my opinion, to allow the Applicants to form a cartel of banks that would act against one or more competitors (both the cartel members – the banks – and the parties with whom they would negotiate – Third Party Mobile Wallet product providers – supply mobile wallet products). There is no economic rationale of which I am aware that would suggest that facilitating the formation of a cartel so that some competitors could better negotiate with other competitors would likely produce a pro-competitive (or even a competitively neutral) outcome. Even if, for the sake of argument, one were to accept that there might be some degree of imbalance in the market power and/or the bargaining power

between an individual bank and a Third Party Mobile Wallet supplier (such as Apple), forming a cartel to address such an imbalance is not consistent with the economic tenets of sound antitrust policy. In fact, in my opinion it is well outside the bounds of conventional economic wisdom.

27. Moreover, an equally troubling aspect of the conduct proposed for authorisation is that the conduct would be aimed not only at the one party (i.e., Apple) the CRA Report asserts as having greater bargaining and/or market power than the Applicant banks, but the conduct could also be used to negotiate with parties that apparently, according to the Applicant banks, do not enjoy any such bargaining and/or market power advantages vis-à-vis the Applicant Banks (e.g., products such as Android Pay or Samsung Pay). Thus, even if, for the sake of argument, one were to accept (erroneously, in my opinion) the proposition that the conduct proposed for authorisation could produce a more efficient outcome than individual bank negotiations in the case of Apple (and Apple Pay), it is likely that allowing banks to negotiate as a cartel with other Third Party Mobile Wallet suppliers would produce an inefficient outcome, resulting in competitive detriments in relation to those third parties.³³

V.2 Lack of Rigorous Economic Analysis

28. There is no apparent economic analysis in the CRA Report except for the prisoners’ dilemma example (which in my opinion is inapplicable in these circumstances – see also Section V.8 below for an extensive discussion of the reasons why the prisoners’ dilemma analogy is inapt). Subsequent sections of Part V of my report include more detailed discussion relating to the lack of economic analysis, for example in relation to identifying and defining relevant markets and in relation to analysing market power issues. There are no citations to the economic literature or to empirical economic analysis in the CRA Report. While there are a few citations to Reserve Bank of Australia publications, in subsequent Sections of this report I discuss why the issues raised in relation to the Reserve Bank’s regulation of credit card interchange fees (which are referred to in the Reserve Bank citations

³³ The basis for this conclusion is the fact that a monopolist facing a supplier without substantial market power would likely extract sub-competitive prices (and non-price terms) from that supplier. See, e.g., OECD, *Monopsony and Buyer Power* Policy Roundtables (2008); R. Noll, “Buyer Power and Economic Policy”, *Antitrust Law Journal*, Vol. 72, Number 2, 2005; and R. Blair and J. Harrison. *Monopsony in Law and Economics*. Cambridge University Press, 2010. Of course, even if the supplier did have substantial market power, any negotiation between a monopolist and that supplier would not necessarily result in an efficient price (or non-price terms). This latter circumstance is the so-called bilateral monopoly outcome. The economic literature establishes that bilateral bargaining cannot replace competition as a means to achieve efficient outcomes. In a bilateral monopoly where the selling-side is monopolised and the buying-side is monopsonised, the market outcome is indeterminate with price depending on the respective bargaining abilities of the buyer and the seller. See, e.g., R. Pindyck and D. Rubinfeld, *Microeconomics*, 2005, 6th edition, pp. 370-371. Kirkwood (2012), writing in the context of a merger that countervails monopoly power of a supplier upstream, describes this situation as follows “[W]here a merger of buyers results in both bilateral monopoly upstream and monopoly power downstream, the outcome is likely to be anticompetitive, not procompetitive. The retail price is likely to be no lower than the premerger level, and could easily be higher, and non-price rivalry at the retail level would be eliminated, potentially reducing innovation and choice.” J. Kirkwood, “Powerful Buyers and Merger Enforcement,” *Boston University Law Review*, Volume 92, 2012: p. 1535.

included in the CRA Report) have little or no relevance to issues of concern in any economic evaluation of the issues raised by the Authorisation Application.³⁴

29. Instead of citing to the economic literature, the CRA Report appears to consist of a compilation of information from news media sources, press releases, third party market research reports and websites, largely organised to support the asserted proposition that banks negotiating individually with Apple for the Apple Pay mobile wallet product would be at a disadvantage in terms of bargaining power (in part because Apple ecosystem includes superior products that have achieved considerable success in the marketplace).³⁵ With the single exception of the prisoners’ dilemma game, neither economic theory nor the application of economic principles is a significant element of the presentation in the CRA Report.
30. As just one example of the lack of rigorous economic analysis (others are cited in subsequent Sections of this report), the CRA Report references a statement in a CNBC Report:
 - a. “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.”³⁶
31. The economic objective of presenting this information is not entirely clear, other than as part of a set of information presented in the CRA Report to demonstrate some degree of product differentiation between iOS smartphones and Android smartphones.³⁷ On its face, as a standalone statement, the information may have some degree of superficial plausibility and some relationship to product differentiation (at least in terms of customer perception), particularly in light of other information presented in the CRA Report. The CRA Report, for example, presents information indicating that the average price of an iPhone is higher than the average price of an Android smartphone (a result, at least in large part, of the differences in the marketplace strategy of Apple, which focuses on the upper end of the marketplace for smartphones, and the collective strategies of Android smartphone suppliers, which (collectively) supply at a variety of price points).
32. However, the economic significance of the information in the statement cited above is unclear, even if one were to accept, for the sake of argument, that elements of the statement might be correct. Most importantly, even if (again, for the sake of argument) such tendencies were to exist, information on the strength of the tendencies and the prevalence of such tendencies would be required in order to draw any conclusions about substitutability between the different types of smartphones. But no such information is presented in the

³⁴ Four of the five citations to Reserve Bank of Australia (RBA) documents in the CRA Report refer to regulation of interchange fees and merchant surcharging (footnotes 64-66 and 68), as does one additional source (footnote 67, which refers to a Financial Services Inquiry Report). The fifth footnote that cites an RBA source (footnote 52) relates to fraud risk.

³⁵ CRA Report, e.g., paragraphs 56, 67 and 127.

³⁶ CRA Report, paragraph 61.

³⁷ A significant part of the CRA Report presents information intended to demonstrate differentiation between iOS and Android smartphones. See, for example, CRA Report, paragraphs 61-74.

CRA Report. The CRA Report contains no rigorous analysis of substitutability (it can be more accurately characterised as a recitation of information that is used to assert a conclusion of no/poor substitutability between iOS and Android smartphones), even though relevant quantitative information on substitutability is contained in the CRA Report, but, in my opinion, is misinterpreted.³⁸

33. Ultimately, it is likely uncontroversial that iOS devices and Android devices are differentiated products, but differentiated products can and do compete within a single relevant market in many circumstances. That is why the fact that iOS and Android phones are differentiated is not determinative in identifying relevant market boundaries for smartphones (assuming that mobile phones or even smartphones were products in a relevant market of interest for this case). While information from the news media and other similar sources may be useful inputs to an economic analysis, such information is not a substitute for economic analysis. The uncritical acceptance of the CNBC statement and other similar statements in the CRA Report (apparently, in combination with other information presented in the CRA Report, to support the assertion that iPhones and Android smartphones are so differentiated that they may not be substitutes) is an inadequate substitute for economic analysis. The uncritical acceptance of information from the news media and other sources and the significant focus on smartphones is particularly problematic in light of the fact that:
- a. Highly relevant information on substitutability is presented in the CRA Report (see also Section V.3 below), but the implications of that information are misinterpreted, and the conclusions drawn are diametrically opposed to those that an economic analysis would suggest; and
 - b. The Authorisation Application is ultimately concerned with the marketplace(s) for mobile payment/banking products and mobile wallet products in particular. However, instead of focusing on the marketplace for mobile wallet products (or even financial services, of which mobile wallet products are a part), the CRA Report largely concentrates on the marketplace for smartphones. The Report simply asserts that a purported (and in my view erroneous) lack of substitutability among rival smartphone formats will significantly harm competition and welfare in the provision of mobile wallet products rather than analysing the marketplace for mobile wallet products and the means of competing and competitive constraints within that marketplace.

V.3 No Analysis of Relevant Market

V.3.1 *Some Market Definition Principles*

34. Because “competition” is such an important consideration in antitrust policy, it is appropriate to examine the concept from an economic standpoint. The concept is fundamentally rooted in the notion of rivalry between economic entities in their efforts to

³⁸ See Section V.3 below for a discussion of quantitative information relating to substitutability in the CRA Report.

obtain and retain consumers. It is important to note that competition takes place within a market. A relevant antitrust market is best regarded as a set of competitive constraints on the ability to profitably to raise the price of a product above some benchmark level for a significant period of time (this is explained in more detail below).

35. Competition is not an economic abstraction but rather a continuous vying for consumers driven by the profit motive and entrepreneurial incentives. In competitive markets, firms have strong incentives to offer products and services that match consumers' preferences and, in order to stay competitive, ensure efficient production and responsive innovation.³⁹
36. The most fundamental concept in market definition analysis is that of substitution.⁴⁰ For competition purposes, the market definition task delineates an area of close competition relevant to the firms, products and conduct at issue.⁴¹ As such, market definition seeks to identify the relevant competitive constraints on the firm(s) and conduct at issue. Substitution, in either demand and/or supply, is what defines that area of close competition.⁴² More specifically, it is *close* substitutes that one seeks to identify, since it is close substitutes that will impose competitive discipline on the firm and conduct at issue.⁴³ The ACCC *Merger Guidelines* are consistent with this principle.⁴⁴
37. Demand side substitution occurs when a change in relative prices induces a shift in demand, for example from a relatively higher priced product to a relatively lower priced product. Supply side substitution occurs when a change in relative prices induces a shift in supply, using existing capacity,⁴⁵ for example from a relatively less profitable product to a relatively more profitable product. Both types of substitution can constrain a firm from increasing its prices or otherwise disadvantaging consumers.⁴⁶

³⁹ E.g., see, J. Ordover, "Economic Foundations of Competition Policy: A Review of Recent Contributions," in W. Comanor, et al., *Competition Policy in Europe and North America: Economic Issues and Institutions, Fundamentals of Pure and Applied Economics* (Vol. 43), Harwood Academic Publishers, 1990, 7-42 and D. Carlton and J. Perloff, *Modern Industrial Organization*, 4th Edition, Pearson Addison-Wesley, Boston, 2005, *op. cit.*, especially Chapter 3.

⁴⁰ United States Department of Justice and United States Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, e.g., see page 7; Australian Competition and Consumer Commission, *Merger Guidelines*, November 2008, e.g., pp. 16ff.

⁴¹ D. Sheffman and P. Spiller, "Geographic Market Definition under the U.S. Department of Justice Merger Guidelines," *The Journal of Law and Economics*, 30(1) (1987), 123-147.

⁴² E.g., D. Carlton and J. Perloff, *op.cit.*, pp.646ff.

⁴³ E.g., see M. Motta, *Competition Policy: Theory and Practice*, Cambridge University Press, 2004, pp. 103ff and J. Baker, "Market Definition: An Analytical Overview," *Antitrust Law Journal*, 74 (2007) 129.

⁴⁴ Australian Competition and Consumer Commission, *Merger Guidelines*, November 2008, see Chapter 4, particularly pages 16-23. For example, see paragraphs 4.12 and 4.13.

⁴⁵ Where new capacity and/or significant new investment are required to supply the new product, this is considered to be market entry, requiring an analysis of barriers to entry. "Supply-side substitution" carries this narrow meaning within the context of market definition analysis. However, the term "supply-side substitution" outside this context could refer to either shifts of existing capacity to supply of another product or to development of new capacity to supply a product.

⁴⁶ The concept of supply-side substitution in market definition analysis is based on the principal of so-called "hit-and-run entry". Such entry can only be accomplished if a firm mainly uses existing assets, with no or minimal investment in sunk costs, to shift production from another product to the product of interest.

38. In considering “close substitution,” the question naturally arises as to how close substitution must be for the purpose of defining a market?⁴⁷ In the United States, the European Community and Australasia, antitrust regulators and others utilise the so-called hypothetical monopolist paradigm, which employs the SSNIP test (small but significant non-transitory increase in price) – also known as the hypothetical monopolist test.⁴⁸ The hypothetical monopolist test has been adopted as the pedagogical tool for determining market boundaries by most competition authorities in their merger guidelines (and is commonly used as a pedagogical tool in other competition analyses as well).⁴⁹ This test attempts to provide a more precise framework for analysing substitutability. The relevant market is generally identified as the smallest area over which a hypothetical monopolist could profitably impose a SSNIP.⁵⁰ Starting with the firm, product(s) and geographic area(s) of supply, the market is gradually expanded to encompass all sources of close substitution that would otherwise defeat such a SSNIP (i.e., by making it unprofitable through sufficient demand- and/or supply-side substitution).
39. For example, in considering demand-side substitution only,⁵¹ if a hypothetical monopolist of Product A attempted to implement a SSNIP, but a sufficient number of consumers, in response, would switch to purchasing Product B so that the SSNIP on A would be unprofitable to the hypothetical monopolist, then Products A and B are in the same relevant market. Thus, it is not the fact that some consumers might switch from Product A to Product B that is determinative of market boundaries, but whether a sufficient number would switch to make the posited price increase on Product A by the hypothetical monopolist (of Product A) unprofitable. If enough consumers would switch, the two products are in the same relevant market (based on demand-side substitutability). If not, the two products are not in the same relevant market. One should note, too, that, if there are several products that compete within the same market as Product A, then it is the cumulative switching to all these alternative Products by consumers that determines whether close demand-side substitutes for A exist.

⁴⁷ E.g., see Jonathan B. Baker, “Market Definition: An Analytical Overview,” *Antitrust Law Journal*, 74 (2007) 129, pp. 142ff; M. Motta, op. cit, pp. 102-103; and Malcolm B. Coate and Jeffrey H. Fischer, “A Practical Guide to the Hypothetical Monopolist Test for Market Definition,” <http://ssrn.com/abstract=940667>, October 2007, pp. 6-10 for a discussion of substitutability and market definition analysis.

⁴⁸ In merger cases, the SSNIP is normally supposed to be applied using currently prevailing prices, because the objective is to determine whether and to what extent merger parties can enhance any market power they currently possess. Consequently, market boundaries are evaluated based on substitution possibilities that exist prior to the merger’s occurrence. In non-merger cases, the SSNIP is supposed to be applied using competitive market prices (generally using a workably competitive market price as the benchmark for analysis).

⁴⁹ See, for example, the Australian Competition and Consumer Commission, *Merger Guidelines*, Section 4 and the United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, pp. 8-12.

⁵⁰ The SSNIP may be set at any level, but is generally set in the 5–10 per cent range (e.g., see the United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, p. 10, which states that a SSNIP of five percent is typically used).

⁵¹ I.e., assuming a set of circumstances where there was no supply-side substitutability.

40. There is a broad consensus among economists and regulators, first, that market definition analysis can be of considerable assistance in many circumstances for assessing competition issues and, second, that the hypothetical monopolist paradigm and the SSNIP test are useful methodological tools for evaluating market boundaries. While analysis of demand-side substitution is widely viewed as necessary step in defining market boundaries, there is some dispute among economists as to whether consideration of supply-side substitutability is necessary to define the boundaries of a relevant market. For example, the United States *Horizontal Merger Guidelines* does not include supply-side substitutability considerations in defining relevant market boundaries, but instead uses supply-side substitution to identify participants in a relevant market.⁵² In a general sense, in my opinion, in most circumstances both approaches are broadly consistent in terms of the answers they derive.
41. More recently, there have been significant questions raised about the efficacy and relevance of conducting formal market definition analyses, at least in some circumstances. For example, Salop (2000) and other economists and lawyers have questioned the need for defining markets in circumstances where competitive effects can be measured directly.⁵³ The 2010 *Horizontal Merger Guidelines* issued by the US Department of Justice and the US Federal Trade Commission have explicitly recognised the proposition that market definition exercises may not be needed in all circumstances, at least as an initial matter.⁵⁴ There has also been criticism of the hypothetical monopolist test and the market definition exercise more generally as too blunt an instrument when two products within a market are particularly close substitutes, particularly in markets where considerable product differentiation exists.⁵⁵ Finally, some regulators have acknowledged that market definition is one tool in evaluating competition issues and it may not, in some circumstances, be necessary for the analysis.⁵⁶ While these criticisms have substantial merit, in my opinion these alternative analytical approaches generally imply a market definition and, in some cases, entail the use of significant assumptions about the structure and nature of competition within that market. For this reason, one should be cognisant of the implications of these alternative analytical approaches and should, where useful and feasible, utilise them.

⁵² E.g., see J. Ordover and R. Willig, op. cit. , p. 144. See also the United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, p. 7.

⁵³ E.g., see S. Salop, "The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium," *Antitrust Law Journal*, 68 (2000), 187; and L. Kaplow, "Why (Ever) Define Markets?" *Harvard Law Review*, 124 (December 2010), 437.

⁵⁴ United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, p.7. Of course, assessing competitive effects directly is much more difficult (and sometimes not possible) in cases, such as this case, where any competitive effects are prospective (i.e., they have not yet occurred). That is why market definition is important in this case, which is concerned with a proposed authorisation of future conduct.

⁵⁵ E.g., see J. Farrell and C. Shapiro, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition," 25 November 2008, prepared for the Federal Trade Commission's February 2008 "Unilateral Effects Analysis and Litigation Workshop,"; and R. Gilbert and D. Rubinfeld, "Revising the Horizontal Merger Guidelines: Lessons from the U.S. and the E.U.," February 2010. In my view, while these critiques have merit, the discipline imposed by the performing a market definition analysis is generally useful for assessing competitive effects.

⁵⁶ See "Federal Trade Commission Seeks Views on Proposed Update of the Horizontal Merger Guidelines," press release, 20 April 2010, <http://www.ftc.gov/opa/2010/04/hmg.shtm> and the United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, p.7.

However, there remains significant utility in performing the traditional market definition exercise, particularly given the additional rigor it can lend to the analysis in conjunction with use of alternative analytical approaches for assessing competitive impacts.

V.3.2 The CRA Report does not define a relevant market

42. As I noted in the preceding paragraph, it is not imperative that a relevant antitrust market be defined in all cases, even though in most cases it is both advisable and desirable, particularly for prospective conduct (i.e., where it is not possible for obvious reasons to assess impacts that have already occurred because they have not yet occurred). Put simply, investigating the competitive impacts of prospective conduct is facilitated by employing a clear concept of the market (or markets) in which the conduct is proposed to occur. Given that the Authorisation Application concerns proposed prospective conduct and the decision as to whether to authorise that conduct depends on whether competitive benefits would (in future) likely outweigh competitive detriments, in my opinion it is desirable in this case to identify the relevant market or markets of interest in order to develop a reliable assessment of positive and negative impacts.
43. However, there is no identification of the relevant market (or markets) in the CRA Report. The narrative in that Report shifts among smartphones, mobile wallets, banking, payment instruments and technology (e.g., QR codes and NFC chips) in a fluid manner, without any apparent pattern that would lead one to identify what relevant market (or markets), if any, is (are) being proposed for impact analysis.⁵⁷
44. Moreover, the concept of substitutability that appears to prevail in the CRA Report does not accord with sound economic principles. For example, price differences among different types of products do not preclude competition among them in a single relevant market, particularly when those price differences are a reflection of perceived quality differences.⁵⁸ Price differences based on quality differentials persist in many markets.
45. In any case, the CRA Report did not identify the relevant market (or markets) that should be the focus of an inquiry into mobile wallet products (which are the focus of the Authorisation Application). Instead, the CRA Report focuses its discussion of substitutability on smartphones, implying, without demonstrating, that demand for mobile wallet products are in some manner completely derivative of demand for smartphones. In my opinion, because no relevant market (including the boundaries of that market) for the product of interest in the Authorisation Application – mobile wallet products – was identified in the CRA Report, there is no reliable economic basis for a sound analysis of the competitive forces and competitive constraints that affect the suppliers of mobile wallet products.

⁵⁷ The Authorisation Application does include a section on market definition (Section 4), but does not use economic principles to define the relevant market. In any case, the boundaries of the relevant market identified (“mobile payment and mobile wallet services” – e.g., see page 30) are poorly specified.

⁵⁸ E.g., CRA Report, paragraphs 56, 67 and 127, where price differences in smartphones are discussed.

46. However, even the discussion of smartphone substitutability in the CRA Report is deficient from an economic perspective. Particularly problematic, in my opinion, is the interpretation in the CRA Report of the only specific quantitative information on smartphone substitution patterns.⁵⁹ The Report notes that, in one 3 month period, 24 percent of iOS buyers switched from Android and 13.5 percent of Android buyers switched from iOS.⁶⁰ While not definitive, this appears to indicate significant substitution between smartphone operating systems in a short period of time, contrary to the inference drawn in the CRA Report.
47. Even more important, in my opinion, the focus on short-run substitution patterns and price differences, whether in smartphones or mobile wallet products, tends to obscure the extremely dynamic nature of marketplaces for these two types of products. Competition in highly dynamic and innovative markets generally focuses more on product features, innovation and product quality than on price and generally over a somewhat longer period of time (e.g., since changes in innovation and product features may play out over longer time periods, even in markets with high rates of innovation). It should be uncontroversial that, for both types of products, rates of innovation are high, as the different suppliers compete vigorously to upgrade products, add new features and improve customer experiences. Also, for both types of products, significant entry has occurred recently. This is indicative of highly competitive marketplaces, a conclusion seemingly at odds with the conclusions about competition in the CRA Report.
48. Moreover, dynamic competition, because it relies so heavily on innovation (e.g., in technology, product features, product delivery methods and/or business revenue models), is inherently unpredictable in terms of its dimensionality, speed and direction. Imposing artificial constraints (such as might occur if some competitors – i.e., the banks – with large customer bases were allowed to form a cartel to negotiate with other competitors – i.e., Third Party Mobile Wallet suppliers – in order for those non-cartel competitors to gain access to provide services to the cartel members’ customers) on dynamically competitive industries may lead to unintended consequences (e.g., foreclosing beneficial competitive options) over the long run, which, in turn, could lead to significant and negative dynamic efficiency impacts.
49. Finally, one inference that one might draw from the CRA Report is that iOS is a market unto itself (and Apple is a “monopolist” in that “market”) or that Apple Pay is a market unto itself (and, again, Apple is a “monopolist” in that “market”).⁶¹ Economists are generally

⁵⁹ It is not certain that smartphones are an (or the) appropriate relevant market for analysis of the proposed conduct of interest, even though smartphones may be relevant to assessing the consequences of the proposed conduct. I do not define relevant market(s) for analysis in this case (that task was not part of my assignment), but provide comments on the market definition analysis (or lack thereof) in the CRA Report and the implications of the lack of any identification of relevant market for the analysis of the effect of the proposed conduct.

⁶⁰ CRA Report, paragraph 67. Note that the new iPhone 6 models were launched in September 2015, which may be, at least in part, the reason why a larger percentage of iOS buyers switched from Android than vice versa during that particular calendar quarter (see CRA Report, paragraph 63).

⁶¹ The idea that Apple Pay is a monopoly product (or could be unless issuing banks are able to gain access to the embedded NFC chip within iOS smartphones) appears to be contradicted by the banks own marketing information. It

sceptical of market boundaries defined on the basis of a single brand.⁶² There has been insufficient analysis presented in the CRA Report that would identify market boundaries relevant to mobile wallet products (or even smartphone products, which was the focus of much of the discussion of the CRA Report). In both cases, significant competitors exist and vigorous competition appears to prevail.

V.4 Unsound Analysis of Market Power

V.4.1 Some Market Power Principles

50. It is important to be precise when using the term “market power” in terms of its meaning in economics. To an economist, market power merely implies that a firm has some discretion over its prices and/or its level of product quality.⁶³ When a firm has some market power, if it raises its prices, it would not lose all (or even, in many circumstances, most) of its customers. Realistically, almost every firm in the real world has some “economic” market power. A firm can have market power for many reasons —e.g., it has superior products, a lower cost structure, products that are differentiated, superior technology (protected by a patent or not), and/or because of barriers to entry or expansion in an industry. Moreover, market power is necessary, but not sufficient, for a conclusion that conduct may harm competition because, without market power, a firm has little or no control over price.
51. The degree of market power of concern for competition policy generally is considerably higher than mere economic market power. In the parlance used in the United States in antitrust analysis, “monopoly power” or the potential to obtain monopoly power, is a threshold of concern when analysing certain conduct. In Australia, the threshold is a “substantial degree of market power”. In other jurisdictions, “dominance” may be of concern in measuring market power.⁶⁴

is my understanding that at least some issuing banks have promoted the use of attachable (and controllable through software) NFC chips for iPhones for their own mobile wallet products (e.g., see <https://www.commbank.com.au/personal/online-banking/commbank-app/tap-and-pay.html>).

⁶² E.g., see D. Desai, *Brands, Competition Law and IP*, Cambridge University Press, Cambridge, UK, 2015; and H. Hovenkamp, *The Antitrust Enterprise: Principle and Execution*, Harvard University Press, Cambridge, Mass., 2005. The view of brands as a relevant market received some support in law in the *Eastman Kodak Co. v Image Technical Services, Inc.* (504 U.S. 451 (1992)) case, but this view has been strongly criticised by many economists.

⁶³ In technical economic terms this is indicative of the fact that the firm faces a downward-sloping demand curve, so that an increase in price would not necessarily result in a loss of all the firm’s sales. By contrast, in a perfectly competitive market, any increase in price above the competitive level would result in the loss of all of the firm’s sales.

⁶⁴ “As courts and commentators have recognized, however, the antitrust laws require varying amounts of market power, depending on the nature of the allegations. For a plaintiff to prevail on a tying claim under Sherman Act Section 1, for example, the plaintiff must prove that the defendant possesses market power in the market for the tying product, i.e., that it has the ability to impose anticompetitive effects...A monopolization claim under Sherman Act Section 2, in contrast, expressly requires the possession of monopoly power, and attempted monopolization under Section 2 requires that the defendant have a ‘dangerous probability of success’ in achieving monopoly power. However, courts analyzing whether monopoly power exists use the basic concepts as those used in evaluating market power.” See, ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies* (2012): 6-8; and see, e.g., H. Hovenkamp, *The Antitrust Enterprise: Principle and Execution*, (Harvard University Press, 2005), p. 206.

52. In any case, from an economic perspective, these market power terms are associated with a firm that can act persistently in a manner materially different from the behaviour that would be observed for a firm in a “workably competitive” market. Market power in this context would be the ability to profitably maintain prices above competitive levels for a significant period of time and restrict entry (or significant expansion by rivals). Alternatively, again in economic terms, firms with significant market power face limited constraint from competition. There is no specific threshold market share recognised in economic theory as conferring monopoly power either by economists or by regulators.⁶⁵
53. Moreover, from an economic perspective, the mere existence of a large market share is not sufficient to establish the existence of substantial market power (or the possibility of obtaining it). There must also exist sufficient barriers to entry (or expansion) so as to protect that market share (and supracompetitive prices) from being significantly eroded by industry entrants and/or expansion by other incumbents.
54. Finally, there is an economically significant distinction between market power and bargaining power. Market power is, by definition, a market-wide concept. It implies that a firm has no significant competitive constraints (within a market). Bargaining power relates to the relationships between specific parties – i.e., whether one has more leverage in a negotiation with the other and, thereby, can extract better terms. While the two concepts can coexist, they are not the same, particularly because a party without significant market power may have bargaining power in its negotiation another party or certain other parties in a market (it is even possible that, for different reasons, both parties may have bargaining power in a specific negotiating circumstance).

V.4.2 The analysis of Market Power in the CRA Report

55. Leaving aside the significant issue that no relevant market or markets were defined in the CRA Report, a circumstance that makes it difficult to assess market power or market (or marketplace) impact of the proposed conduct, there are some problems with the concept of market power noted in the CRA Report that should be discussed. Part of the problem is that there is no clear distinction between market power and bargaining power in the CRA

⁶⁵ See <https://www.justice.gov/atr/competition-and-monopoly-single-firm-conduct-under-section-2-sherman-act-chapter-2> (footnotes omitted):

Following Alcoa and American Tobacco, courts typically have required a dominant market share before inferring the existence of monopoly power. The Fifth Circuit observed that “monopolization is rarely found when the defendant’s share of the relevant market is below 70%.” Similarly, the Tenth Circuit noted that to establish “monopoly power, lower courts generally require a minimum market share of between 70% and 80%.” Likewise, the Third Circuit stated that “a share significantly larger than 55% has been required to establish prima facie market power” and held that a market share between seventy-five percent and eighty percent of sales is “more than adequate to establish a prima facie case of power.”

It is also important to consider the share levels that have been held insufficient to allow courts to conclude that a defendant possesses monopoly power. The Eleventh Circuit held that a “market share at or less than 50% is inadequate as a matter of law to constitute monopoly power.” The Seventh Circuit observed that “[f]ifty percent is below any accepted benchmark for inferring monopoly power from market share.”

Report. However, in relation to market power in particular, there are several propositions that appear to relate to market power that are set forth in the CRA Report that do not accord with sound economic theory or principles:

- a. As noted above in Section V.3.2, brands are not normally viewed as separate markets by economists. Consequently, the view that a brand owner has a “monopoly” in relation to buyers of its brand is not generally appropriate from an economic perspective. That is particularly true in the case of brands of smartphones (like iPhones) because many consumers replace their smartphones at regular intervals and, according to statistics cited in the CRA Report, a significant fraction of buyers switch operating systems when they purchase new smartphones.⁶⁶
- b. The Industrial Organisation literature does not promote the formation of cartels as an efficient means to blunt either superior bargaining power or even substantial market power. Instead, if there is a market power problem, it should be dealt with directly, as cartels are generally condemned because they have recognised anticompetitive consequences.
- c. The CRA Report asserts that, if Apple conducts negotiations with each bank separately and confidentially, the banks will be disadvantaged.⁶⁷ “Secrecy” in negotiations between product suppliers and product buyers is not normally viewed as an antitrust problem, even when one party has a bargaining power advantage. To the contrary, complete transparency in negotiations between one supplier and all of its buyers could be viewed as assisting market coordination.
- d. There is no economic principle that would automatically condemn a firm for perceiving strategic advantage in utilising a proprietary standard (or a proprietary system) to compete against other firms. While it is conceivable that such a strategy could be used anti-competitively under certain marketplace conditions, it can be procompetitive under other conditions. Apple has pursued such a strategy for many different products (such as computers, tablets and smartphones). Apple’s conduct is consistent with that of a vigorous competitor (e.g., high rates of innovation and introduction of new and improved products at regular intervals). As in many dynamic, high technology marketplaces, this competition has been manifested mainly in terms of product features, improved user experience and technological innovation rather than price. The CRA Report acknowledges the perception of Apple as a high quality producer that has been able to maintain a premium image and price for its products by producing superior products.⁶⁸ This is key to Apple’s success in the marketplaces in which it competes. Penalising Apple (by allowing some of its competitors to form a cartel) because it has successfully competed (and continues to successfully compete) against rivals is not likely to promote competition.

⁶⁶ CRA Report, paragraph 67.

⁶⁷ CRA Report, paragraph 45.

⁶⁸ E.g., CRA Report, paragraph 127.

56. The market power analysis in the CRA Report also does not acknowledge the significant constraints facing Apple in the marketplace. In mobile wallet products, Apple faces many significant competitors, including banks, Android Pay and Samsung Pay. Apple cannot simply rest on its laurels, but must continue to innovate and improve its products (i.e., compete vigorously) to meet the challenge.
57. In mobile wallet products, Apple faces several large and well-entrenched competitors with deep and long-standing financial relationships with customers. Contrary to statements made in the CRA Report,⁶⁹ there is evidence that bank customers face significant switching costs in relation to at least some banking products.⁷⁰ Consequently, the banks likely have significant influence over customers' choices of financial products, such as mobile wallet products, that they (the banks) can use to their advantage in the marketplace (both for mobile wallet products and other products). There is no analysis in the CRA Report of the impact of these relationships between banks and their customers on the choice of mobile wallet products, other than survey data which, to the extent they may be valid, also suggest that banks possess a significant advantage over Apple in terms of consumer trust in relation to mobile wallet products.⁷¹ Instead, the CRA Report adopts the position that, unless the banks are allowed to form a cartel, the banks will be unable to strike reasonable deals with Apple and will be unable to compete with Apple in the supply of mobile wallet products.
58. Finally, in terms of setting transaction fees, the CRA Report adopts the view that Apple will be unconstrained and may set excessive fees that will distort consumer choice in terms of usage of mobile wallet products.⁷² While I return to this subject in subsequent sections of this report,⁷³ the view adopted in the CRA Report does not appear to consider the impact of RBA regulation of credit card interchange fees on Apple's ability to negotiate transaction fees. The CRA Report appears to rely heavily on the transaction fees Apple was able to negotiate with banks in the USA,⁷⁴ where there is no regulation of interchange fees and banks face a far different credit card pricing structure and regulatory environment than in Australia. The CRA Report appears to place less emphasis on the transaction fees Apple was able to negotiate in the U.K., even though the regulatory environment in the UK is much more similar to Australia (than the USA) and, according to the Authorisation Application, very low fees transaction fees were negotiated for Apple Pay in the UK as compared with those that were negotiated in the USA.⁷⁵
59. The view adopted in the CRA Report in relation to pass through of any mobile wallet transaction fees also does not consider the competitive implications of pass through. If the banks, which are Apple's competitors, can charge customers for transactions fees if the

⁶⁹ CRA Report, paragraph 75. I note that no source is cited for this assertion.

⁷⁰ E.g., see Australian Competition and Consumer Commission, "Public Competition Assessment, Westpac Banking Corporation – proposed acquisition of St George Bank Limited," 13 August 2008, paragraph 71.

⁷¹ CRA Report, see Figures 5 and 6.

⁷² CRA Report, paragraphs 7, 118-122, 148, 158 and 168.

⁷³ See Sections V.5 and V.9 below.

⁷⁴ See Authorisation Application, Attachment C.

⁷⁵ See Authorisation Application, page 11 and page 62.

customers use Apple Pay, but the banks do not charge transaction fees for their own mobile wallet products, the banks could place Apple Pay at a competitive disadvantage, which could distort competition in mobile wallet products.

V.5 Unsound and Incomplete Analysis of Pricing Efficiency Considerations

60. Both the CRA Report and the Authorisation Application raise the possibility that, if the banks are not allowed to form a cartel to negotiate with Apple, Apple purportedly may demand (and receive) excessive transaction fees for Apple Pay mobile wallet transactions, and the banks will not be able to charge consumers for these fees because Apple will purportedly be able to impose on banks prohibitions on pass-through of these fees to consumers.⁷⁶ The CRA Report concludes that excessive fees and prohibitions on pass-through will distort competition in the provision of mobile wallet services.
61. The problems with this line of argument are manifold. For example, as noted in Section V.4 above, the regulation of interchange fees by the Reserve Bank of Australia is, in the light of experience in the UK (where interchange fees are regulated) in comparison to the experience in the USA (where interchange fees are not regulated), likely to act as a significant constraint on the transaction fees that would be agreed between Apple for Apple Pay and the banks, even if the proposed cartel conduct were not authorised (i.e., in the counterfactual utilised in the CRA Report). There is no analysis in the CRA Report of the impact of interchange fee regulation on the transaction fees that might be agreed between Apple (or any other mobile wallet product supplier) and issuing banks.
62. Also, as noted in Section V.4 above, pass through could be used as a competitive tool by the banks to disadvantage Apple Pay in favour of the bank’s own mobile wallet products. The CRA Report does not appear to consider this competitive issue.
63. In addition, there is no analysis presented in the CRA Report of the benefits provided by Apple Pay to the banks (or consumers or merchants), including any cost savings the banks (or others) might experience. Absent such an analysis, there is no way to determine whether or to what extent, if any, any particular level of transaction fees would be “excessive”. In fact, as the CRA Report indirectly acknowledges, the adoption of mobile wallet products is likely to result in significant efficiency benefits. Indeed, implicit in the CRA Report is the view that faster adoption of mobile wallet products would be a significant net benefit to the economy. Both the Authorisation Application and the CRA Report also recognise Apple’s ability to develop attractive high technology products that are user friendly and have high functionality and gain consumer acceptance. To quote from the Authorisation Application 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

⁷⁶ CRA Report, paragraphs 115-123.

effectively.”⁷⁷ Thus, based on Apple’s reputation for developing superior products, it is likely that the adoption of Apple Pay would provide significant benefits (to multiple parties, including issuing banks).

64. Absent an analysis of costs savings and other benefits, a narrow focus on transaction fees alone, as is the case with the CRA Report, is of little use in examining whether those fees would result in inefficient over-use of mobile wallets, as the CRA Report contends is likely in the counterfactual.⁷⁸ Indeed, if the benefits to banks are sufficient, allowing them to charge consumers to recoup transaction fees they may agree to pay Apple might result in inefficient under-utilisation of mobile wallet products. There is no analysis in the CRA Report that would provide a basis for determining this issue one way or the other.
65. Furthermore, there is no analysis in the CRA Report that would even enable one to determine whether and to what extent there would be any difference in either transaction fees agreed or whether and to what extent pass-through by the banks to customers would be allowed between the factual and the counterfactual. Absent any such analysis, any statements about the potential for distortion in consumer choices and/or inefficient over-use (or under-use) of mobile wallet products in the counterfactual as compared with the factual are not demonstrated through any rigorous economic analysis and are without precision. In fact, there is no economic analysis in the CRA Report that would provide any basis on which to determine how the factual would compare with the counterfactual in terms of efficiency, transaction fees or pass-through. Consequently, there is no basis on which to estimate the quantum of benefits the factual might provide to the proposed cartel of issuing banks (or to anyone else) or even whether there would be any net positive benefits. This issue is discussed in more detail below in Section V.9.
66. Finally, even if one were to accept, for the sake of argument, that some greater deviation from efficient prices might occur in the counterfactual as compared with the factual, such an outcome would not necessarily justify authorising a buyer cartel. In fact, it would not necessarily justify any intervention in any marketplace at all. In the real world, prices virtually always deviate from the most efficient prices, but no regulatory intervention is generally recommended to adjust those prices. One reason for this is that regulatory intervention itself imposes costs. Another reason is that it is not necessarily easy to determine how deviations from efficient prices should be adjusted (or even precisely what the efficient price might be). Moreover, regulatory intervention in the form of authorising a private cartel to address the issue is likely to be a very inefficient form of regulatory intervention.

⁷⁷ Authorisation Application, page 26 (see also Attachment B). Statements of similar import are contained in the CRA Report (e.g., see paragraphs 56 and 67). Also paragraph 127 of the CRA Report states “Apple has a history of successfully ‘mainstreaming’ products and services that were niche before Apple turned its efforts to them. 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).”

⁷⁸ E.g., CRA Report, footnote 56.

67. The CRA Report refers to the Reserve Bank of Australia’s intervention to regulate interchange fees as analogous to the current situation.⁷⁹ However, the Reserve Bank was concerned with what it considered a significant market failure in that four-party credit card schemes had no incentives to reduce interchange fees (in fact, according to the Reserve Bank, they had incentives to raise them), and the purported high level of interchange fees had a significant impact on merchant costs. Moreover, the solution it recommended was to regulate interchange fees and allow merchants to recoup the costs of accepting credit cards, not to allow a private cartel to intervene or to allow banks to charge fees to end customers.
68. No such significant market failure appears to be at issue here. Apple has a large number of competitors, but is likely perceived as a competitive threat by issuing banks because it makes superior products and, as a result, has been a successful competitor. There is no attempt in the CRA Report to compare the magnitude of merchant card acceptance costs that the Reserve Bank was concerned about with transaction fees Apple is likely to negotiate for Apple Pay transactions (indeed, there is no information that would enable one to determine what the magnitude of those mobile wallet transaction fees would be in either the factual or the counterfactual). According to information contained in the CRA Report and the Authorisation Application, the transaction fees Apple has been able to secure in the UK,⁸⁰ a jurisdiction that, like Australia, regulates credit card interchange fees, were very low. Consequently, the scale of the “inefficient pricing” issue in relation to any Apple Pay transaction fees, if such inefficiency exists at all, is likely to be of far less concern than was the case for the Reserve Bank in relation to credit card interchange fees. The solution proposed in the Authorisation Application (and supported in the CRA Report) is not for any regulatory intervention to enable third parties to charge transaction fees and to regulate their magnitude, but to enable some of Apple Pay’s competitors (i.e., issuing banks) to form a cartel in order to attempt to negotiate lower fees and better terms from Apple.

V.6 Unsound Analysis of Principle-Agent Issues

69. A distinguishing feature of many vertical relationships is captured through the principal-agent concept.⁸¹ In economics a principal-agent relationship exists whenever one party – a principal – depends on another party – the agent – to undertake some action on the principal’s behalf. While seemingly a straightforward concept that describes relationships that are nearly ubiquitous throughout the real world economy, the principal-agent

⁷⁹ CRA Report, paragraph 156.

⁸⁰ Authorisation Application, Attachment C.

⁸¹ There are many excellent references in the economics and law and economics literature that discuss principal-agent relationships. A few examples are: J.-J. Laffont and D. Martimort, *The Theory of Incentives*, Princeton University Press, Princeton, New Jersey, 2002; P. Milgrom and J. Roberts, *Economics, Organization and Management*, Prentice Hall, Englewood Cliffs, New Jersey, 1992; M. Bergen, S. Dutta and O. Walker, Jr., “Agency Relationships in Marketing: A review of the Implications and Applications of Agency and Related Theories,” *Journal of Marketing*, 56 (July 1992), 1; J. Stiglitz, “Principal and Agent,” in *The New Palgrave Dictionary of Economics*, Volume 6, S. Durlauf and L. Blume (eds.), Macmillan, Hampshire, 2008, 637; and K. Eisenhardt, “Agency Theory: An Assessment and Review,” *Academy of Management Review*, 14 (1) (1989), 57.

relationship poses some fundamental economic issues that, in many contexts, require careful scrutiny and evaluation of the implications of these issues by the parties in the relationship and often lend themselves to only partial and imperfect solutions.

70. Once an agent has been selected by a principal, the central concern for the relationship becomes the alignment of incentives. Perfect alignment is often impossible because there are generally important differences between the actions that will maximise profits for the principal and those that will maximise profits for the agent. These differences are, in turn, exacerbated by the information asymmetries between the two entities – some of which result from actions that are unobserved or even unobservable by one or the other party and some of which occur in response to strategic decisions by one party in respect to its relationship with the other party.
71. The CRA Report implies that the misalignment of incentives between Apple (the agent) and issuing banks (the principals) in relation to the use of Apple Pay has the potential to undermine the security of payment instruments. As an example, the CRA Report cites (as does the Authorisation Application on several occasions) the purported high rates of fraud associated with the initial use of Apple Pay in the USA.⁸² The CRA Report maintains that, for suppliers of Third Party Mobile Wallet products, such as Apple Pay, the incentives to avoid fraud are “muted” because they do not bear responsibility for fraud costs.⁸³
72. However, having raised the issue and implying both that Apple Pay was the source of the fraud problem and that this fraud problem should be addressed by allowing the issuing banks to form a cartel to negotiate not just security issues, but also other elements of their relationship with Apple, the CRA Report subsequently acknowledges that Apple and its Apple Pay product may not, after all, have been the source of any purported fraud issues at the time of Apple Pay’s initial launch in the USA.⁸⁴ In any case, the CRA Report does not analyse in any rigorous fashion the efficient allocation of risk for fraud costs in the multi-party relationships that characterise four-party credit card transactions facilitated by Third Party Mobile Wallet products, such as Apple Pay.⁸⁵ Absent such an analysis of efficient allocation of risk, in my opinion it is not appropriate from an economic perspective to conclude that incentives on any one party are inadequate or that certain parties to the transaction do not bear the appropriate level of responsibility.
73. More to the point, if there are inadequate safeguards against fraud in credit card transactions facilitated by mobile wallet products, the appropriate solution is not, in my opinion to allow a subset of issuing banks to form a cartel to negotiate with Third Party Mobile Wallet product suppliers over security and non-security-related issues. Instead, one useful approach might be to utilise the example of prominent Standard Setting Organisations (SSOs) for

⁸² CRA Report, paragraphs 104 and 163 and Authorisation Application page 39.

⁸³ CRA Report, paragraph 162.

⁸⁴ CRA Report, paragraph 164.

⁸⁵ The schematic provided on page 21 of the Authorisation Application notes six (6) parties that participate in such a transaction. Moreover, there may be additional parties as well, such as third-party payment processors.

many high technology products, such as WiFi standards or mobile telephony standards (e.g., 3G and 4G mobile telephony standards).⁸⁶

74. SSOs generally operate in a manner designed to achieve a consensus among members in a situation where there are many competing interests.⁸⁷ The decision-making process in SSOs is basically cooperative and inclusive (of all interested parties) – standards could not be agreed upon in such a forum any other way.⁸⁸ Thus, the policies of SSOs and similar endeavours are best understood in the context of this basically cooperative exercise in balancing competing interests. From an economic perspective, standards developed by SSOs and similar endeavours would likely promote more efficient outcomes through cooperative effort than the limited cartel proposed in the CRA Report, which would allow a subset of potential participants to dictate security standards to Third Party Mobile Wallet suppliers and negotiate over non-security issues as well. In other words, the conduct proposed to be authorised is likely inefficient in comparison with a more inclusive and cooperative effort that is confined to developing security standards for mobile wallet products.

V.7 Unsound Analysis of Competition and Competitive Benefits

75. Competition provides efficiency benefits in the form of lower prices and higher quality.⁸⁹ However, competitive intensity cannot and should not be measured by the number of competitors or the number of products in a market. For example, it is possible for markets in which there are relatively few participants to be vigorously competitive.⁹⁰
76. The most fundamental problem in the CRA Report from the perspective of presenting an economic analysis of competition (and competitive benefits) for mobile wallet products is the lack of any rigorous analysis of the alternative means for delivering mobile wallet services

⁸⁶ The economics of standards setting is discussed in Grindley, Peter, “Standards, Strategy, and Policy: Cases and Stories,” Oxford: Oxford University Press (1995), pp. 20-29; and Teece, David J. and Edward F. Sherry, “Standards Setting and Antitrust,” *Minnesota Law Review* (2003), Vol. 87, pp. 1913-1994.

⁸⁷ See, for instance, Intel Corporation’s Response to the Commission’s Request for Comments in Connection with Its Patent Standards Workshop, Project No. P11-1204, Federal Trade Commission, August 5, 2011. (“In general, however, SSOs tend to have large and heterogeneous memberships including constituents at various stages of the design and production process, including technology developers, manufacturers of products using those technologies, and customers of those manufacturers. Even at the same level of production, SSOs typically include rivals that are suspicious of each other’s technologies and motivations and are amply motivated to guard against anticompetitive strategic behavior. This healthy diversity of interests makes SSOs well-suited to self-regulate.”)

⁸⁸ “Given the significant stakes frequently involved, the outcome of the discussions over which technologies should be incorporated into any given standard has occasionally strained the standard-adoption process. Some tension is inevitable as each firm desires to promote its own solutions as part of the standard but also needs to work together with other SSO members to develop, establish, endorse, and promote the standard.” Damien Geradin, “Pricing Abuses by Essential Patent Holders in a Standard-Setting Context: A View from Europe,” *Antitrust Law Journal* (2009), 76: 329 at 333.

⁸⁹ When economists discuss price they generally are referring to quality-adjusted price as prices and quality are tightly interrelated.

⁹⁰ T. Bresnahan and P. Reiss, “Entry and Competition in Concentrated Markets,” *The Journal of Political Economy*, 99 (5) (1991), 977.

to consumers. This is a direct consequence of the fact that no relevant market that includes mobile wallet products is defined in the CRA Report (and so the products within that market and the competitive constraints they impose on one another are also not identified). The CRA report appears merely to assume that any mobile wallet products that cannot access the embedded NFC chip in a smartphone would be perceived as so inferior by consumers that these alternative mobile wallet products practically would be unable to compete at all.⁹¹ However, differentiated products are able to compete successfully in many markets. There is no economic analysis (and, indeed, there are no data at all) in the CRA Report to support any assumption that alternative methods for delivery of mobile wallet services would be unable to compete effectively in the mobile wallet marketplace (or the degree to which they might be perceived as less desirable compared with alternatives or the strategies that could be used to ameliorate and/or entirely overcome any purported lack of marketplace acceptance), never mind an assumption that alternatives would be unable to compete at all. Moreover, there is no analysis of the relative benefits and strengths of the Apple Pay product (or any Third Party Mobile Wallet product) in comparison to the banks’ own mobile wallet products, particularly in light of the banks’ advantages in terms of the large customer base to which they provide other financial services. Absent performing these (and other) types of competitive analyses, it is highly problematic from an economic perspective to merely assume, as the CRA Report appears to do, that the competitive benefits associated with the proposed conduct would outweigh competitive detriments.

77. The CRA Report also suggests that the more mobile wallet products that are available, the more closely they will match consumer preferences, and the more rapid will be consumer acceptance and adoption of these products.⁹² While, in theory, such an outcome might be possible, at least under some assumptions, certain real world considerations do not necessarily support such a view. For example, if the marketplace for mobile wallet products is too fragmented, with many differentiated products, consumers may incur significant search costs trying to find the product(s) that best matches (match) their preferences. Also, in such a fragmented and innovative marketplace, the potential for suboptimal choices by consumers is increased, all else equal. In addition, if products are sufficiently differentiated, switching costs may be increased, which would tend to discourage consumers from searching for better choices. The outcome of a highly fragmented marketplace for mobile wallet products could well be to reduce rather than increase consumer acceptance, adoption and usage than if fewer products were more prominent in the marketplace.
78. Such real world outcomes are one reason why, in many real world markets, relatively few products, sometimes with standardised consumer interfaces and/or features, account for very large shares of sales. These outcomes are often more efficient in the long run. In fact, they are one reason why standards (both de facto standards and standards adopted through SSOs) have become so prevalent for many high technology products. Consumers presented

⁹¹ CRA Report, e.g., paragraphs 16-23.

⁹² E.g., CRA Report, paragraphs 92-95.

with a bewildering array of choices, with highly differentiated features and capabilities, can find it difficult to make optimal choices, especially with new, unfamiliar, highly innovative products, with the result that many defer making choices until the marketplace sorts itself out and the best (or at least better) choices become clearer. Personal computers provide an instructive example. When they were first introduced in the late 1970s, there were many different types of PCs, with many different operating systems, software choices and hardware features. The introduction of the IBM PC provided a de facto standard that facilitated the rapid growth of the industry.

79. Viewed against this backdrop, authorising a cartel of some issuing banks, each with their own proprietary mobile wallet products and a customer base relatively resistant to switching that the banks could exploit, could retard any potential movement toward more standardised and/or industry leading products that could increase consumer acceptance, adoption and usage of mobile wallet products. This possibility is not considered in the CRA Report. The CRA Report also does not consider the impact of the use of standardised mobile wallet products on competition in the banking industry (e.g., if the proposed conduct made it easier for banks to deploy their own proprietary mobile wallet products, this could increase switching costs for banking services products for consumers). More generally, standardisation and/or marketplace consolidation (not necessarily on one product, but on relatively few products that may still be differentiated) can provide substantial efficiency benefits, a view not set forth in the CRA Report.
80. For example, mobile wallet products are a compliment to the pre-existing suite of financial services offered by the banks. One competitive strategy the banks could pursue is to offer a proprietary mobile wallet product to its customers, and many banks have done so. Another competitive strategy a bank could pursue would be to embrace Third Party Mobile Wallet products as part of a mobile banking product that it could offer to its customers. I understand that Capital One, one of the more innovative large banks in the USA, has developed a combined mobile banking/mobile wallet product that integrates with Apple Pay.⁹³ On one view, adopting a strategy of utilising Third Party Mobile Wallet products as the basis for mobile banking may promote competition among banks for customers both by embracing cutting-edge technology and by lowering some customer switching costs (e.g., learning costs). The CRA Report does not analyse these wider implications for competition in banking services in its evaluation of benefits and detriments associated with the proposed conduct.
81. It is also problematic that the CRA Report appears to be concerned only with mobile wallet products that access the NFC chip embedded within smartphones.⁹⁴ This is but one method to implement mobile wallet products.⁹⁵ Mobile wallet technology, including the means to implement it, has evolved rapidly, and there is no reason to believe that mobile wallet

⁹³ <https://www.capitalone.com/applications/mobile/apple-pay/>

⁹⁴ CRA Report, paragraph 16.

⁹⁵ CRA Report, paragraphs 16 and 20-23.

technology will not continue to evolve (and rapidly). Smart watches and fitness bands are two alternatives to the use of smartphones for implementing mobile wallet technology, but there are others (e.g., attachable NFC chips that can be affixed to any device or even NFC chips attached to key rings). There is no consideration in the CRA Report of how technology may evolve and what alternatives exist and may be utilised to delivery mobile wallet services and how these developments would impact competition in mobile wallet products.

82. Another problem with the CRA Report’s consideration of competitive issues is the possible implication in the Report that Apple’s strategy of pursuing a proprietary ecosystem may be anti-competitive in some manner.⁹⁶ Firms often pursue many different strategies in real world markets. In some cases they may perceive advantage in using open systems; in others proprietary systems are a preferred means to compete. Apple has, obviously, long pursued a strategy of incorporating proprietary systems in its products. However, the intensity and benefits of competition cannot be measured simply by whether firms utilise open or proprietary systems. Given the high rates of innovation and introduction of new and improved products, the mobile wallet marketplace is one where competition appears to be intense and consumers have many choices and may enjoy significant benefits from competition.
83. Moreover, in my opinion, the CRA Report has presented an inadequate evaluation of the potential negative reputational effects on Apple of a faulty mobile wallet app, even if supplied by a non-Apple source (in my opinion the torch app and the compass app⁹⁷ are not useful analogies in this circumstance, as the potential reputational impacts of problems with torches or compasses are likely to be significantly different than for problems with mobile wallet products). Given that Apple is viewed as providing products that utilise a proprietary ecosystem, it seems more likely, all else equal, that a consumer would place at least some blame on Apple if the consumer lost money and/or was otherwise significantly inconvenienced as a result of a faulty mobile wallet app installed on an Apple device. This allocation of blame may not be as serious for a faulty mobile app on an Android device, given that many consumers understand that that Android devices utilise a more open ecosystem.
84. The marketplace for mobile wallets is highly dynamic, with high rates of innovation and vigorous competition among many significant suppliers. The CRA Report has not demonstrated that this marketplace is not vigorously competitive and in fact likely to be highly dynamically efficient. Dynamic efficiency is the main contributor to economic efficiency and consumer benefits over the long run. Authorising a cartel among some of the mobile wallet competitors – in particular, competitors (i.e., banks) with a customer base relatively resistant to switching that these competitors could exploit – seems an unlikely way to make the mobile wallet marketplace more efficient. In fact, there is considerable reason

⁹⁶ E.g., CRA Report, paragraphs 96-97.

⁹⁷ CRA Report, paragraph 97.

to suspect it could reduce efficiency, as cartels, even those of limited duration, are generally viewed as causing inefficient outcomes.⁹⁸ Moreover, even though the proposed cartel is of limited duration, the ill-effects of the cartel could persist beyond the period of its existence.⁹⁹ The chances for harm are increased, in my opinion, when, as in this case, one objective of the cartel is to alter a long-standing competitive strategy (i.e., a proprietary ecosystem) by one of the main competitors in the marketplaces for both mobile wallets and smartphones.

V.8 The Prisoners’ Dilemma is an Inapt Model for Analysing Impact

85. The CRA Report makes significant use of the so-called “prisoners’ dilemma” (sometimes noted as the “prisoner’s dilemma”) to develop a justification for authorising a cartel of issuing banks to negotiate with Third Party Mobile Wallet suppliers.¹⁰⁰ In my opinion, the prisoners’ dilemma is an inapt analogy to the situation facing all parties in this case (including issuing banks and Third Party Mobile Wallet suppliers) and provides no useful insight into whether the cartel conduct proposed should be authorised.
86. The prisoner’s dilemma describes a circumstance or “game” (in economic parlance¹⁰¹) in which two players each face the same options, the outcome of those options dependant on choices made (either simultaneously or virtually simultaneously) by the other player. It is generally represented by two prisoners deciding whether to confess to a crime they committed based on the punishment they might receive under cooperation versus competition. Inherently, for the game participants, the optimal collective solution is cooperation (although it may not be in the best interest of an individual participant who can “cheat” so as to increase his/her payoff unilaterally). That is, in any situation, given the general structure of payoffs included in this game, the prisoners’ dilemma would suggest that forming a cartel is the optimal outcome (i.e., cartel formation is the dominant strategy in this game, assuming, as the game normally does, neither cheating nor holdup is possible).
87. While economic games can sometimes be helpful in analysing the potential economic impact of real world conduct, the degree to which they can be helpful diminishes the farther the abstraction represented by the conditions of the game deviates from real world circumstances. If the conditions prevalent in the game deviate significantly from real world circumstances, the game is unlikely to be of any practical utility in understanding potential real world impacts of conduct. In my opinion, the marketplace circumstances for mobile wallet products deviate so far from the conditions described in the prisoners’ dilemma that the prisoners’ dilemma game is not an apt analogy and provides no useful insight into

⁹⁸ D. Carlton and J. Perloff, *op. cit.*, Chapter 5.

⁹⁹ See, e.g., Joseph E. Harrington, Jr. (2004) “Post-Cartel Pricing During Litigation,” *The Journal of Industrial Economics*, vol. LII, no. 4, pp. 517-533.

¹⁰⁰ CRA Report, paragraphs 51-53, 81-84, 88-89, and 170-173.

¹⁰¹ In economics, three elements comprise a game – a roster of players, strategies for those players (i.e., actions they can take) and a set of payoffs or outcomes based on strategies chosen. See, e.g., R. Pindyck and D. Rubinfeld, *Microeconomics*, 2005, 6th edition, pp. 473-474; and, J. Church and R. Ware (2000), *Industrial Organization: A Strategic Approach*, pp. 215-219.

optimal strategies for issuing banks or mobile wallet product suppliers. Some of the major deviations in circumstances include:

- a. There are more than two players, even if one aggregates types of players. For example, there are issuers who have signed agreements with Apple Pay, issuers who are proposing to combine into a cartel and issuers who are currently uncommitted. In addition, there may be non-issuers and/or hybrid issuers (e.g., large retailers that may enter into a quasi-issuer relationship with a bank or other financial institution). This is not to even mention the different business circumstances and strategies of Third Party Mobile Wallet suppliers. While it is possible to develop a prisoners’ dilemma-like game for n-party circumstances (where “n” is greater than two), it would be a much different game, with the possibility of a much different outcome, than the prisoners’ dilemma game set forth in the CRA Report.
- b. The prisoners’ dilemma game assumes two possible outcomes (or “payoffs”) for each choice facing the players. In the real world, issuing banks face a multi-objective utility function that requires each of them to consider different payoffs to multiple choices, depending on the strategies of rivals. In part this arises from the fact that incentives of the issuing banks, even just those applying to be members of the cartel, are not likely to be perfectly aligned for any particular outcome (in fact, there could be significant deviations from perfect alignment). This is far removed from the circumstances of the prisoners’ dilemma game.
- c. The prisoners’ dilemma game considers that there is just one optimal outcome from cooperation. However, the combination of a cartel with a collective boycott implies that hold-up by one of the cartel members is a possibility (if one issuing bank believes it can extract a higher payoff by forcing other cartel members into sub-optimal outcomes). Hold-up is not a feature of the prisoners’ dilemma game.
- d. Information in the prisoners’ dilemma game is considered to be totally compartmentalised in the absence of cooperation. In the real world, the issuing banks do not operate in such an environment.
- e. The prisoner’s dilemma game considers that the payoffs to the participants are fixed and exogenous. This is not an accurate representation of the negotiations between the issuing banks and the Third Party Mobile Wallet suppliers, particularly in light of the fact that two significant issuers have “broken ranks” (i.e., American Express and ANZ Bank have signed agreements with Apple for Apple Pay) and other issuers have not committed to the conduct proposed for authorisation. In this case, payoffs are neither fixed nor exogenous.
- f. Closely related, the prisoners’ dilemma game posits an external arbiter that controls the game and sets payoffs. No such external arbiter exists in this situation.
- g. Also closely related, the prisoners’ dilemma game assumes the potential payoffs for each strategy are known to all parties. In the real world, the payoffs are uncertain

(and likely rely on private information) and depend on the actions of many parties, including “non-prisoner” parties (e.g., issuing banks that have already signed agreements for Apple Pay and issuing banks that are not committed to the conduct proposed for authorisation).

- h. The prisoners’ dilemma game does not consider that parties outside of the “prisoners” can affect the behaviour of and optimal solution for the “prisoners” (e.g., other issuers and Third Party Mobile Wallet suppliers). This assumption does not reflect the real world circumstances faced by the Applicants.
- i. The prisoners’ dilemma game does not recognise that outside parties with whom the “prisoners” are negotiating are also competitors with the “prisoners”. In this circumstance, the issuing banks are competitors with Third Party Mobile Wallet product suppliers and with other issuing banks (including both banks that have signed agreements to offer Apple Pay and uncommitted banks) in the sense that both banks and Third Party Mobile Wallet suppliers offer mobile wallet products. Modelling this circumstance would require a much more complex (and likely very different) game than the prisoners’ dilemma.
- j. No payoffs are also an option explicitly recognised in the CRA Report, which acknowledges that it is possible that no agreement between Apple and the proposed cartel may be the outcome of the conduct proposed for authorisation.¹⁰² This entails a circumstance in which the Applicants restart negotiations. In essence, this means that the “game” the Applicants are playing has features akin to a repeated game (one that occurs in multiple time periods). The prisoners’ dilemma game presented in the CRA Report is a single period game, not a repeated game.
- k. The prisoner’s dilemma game entails an assumption that payoffs occur when the prisoners choose a strategy (i.e., cooperate or not). In this case, the choice of strategy (i.e., forming a cartel) implies the potential for a payoff, but the payoff is uncertain in terms of whether it occurs (e.g., just because the cartel has been formed does not mean an agreement with Third Party Mobile Wallet suppliers would be possible), in terms of when it might occur and in terms of what form it would take, if it were to occur (e.g., whether and to what extent exclusivity and pass-through would be allowed). In other words, in the mobile wallet marketplace, cooperation among the banks to negotiate with Third Party Mobile Wallet suppliers sets a strategy, but does not guarantee a positive payoff for the banks (because they do not control whether a Third Party Mobile Wallet supplier will agree to terms) or even any certainty in the form or magnitude of the payoff. This describes a much different game than the prisoners’ dilemma, where cooperation between the prisoners brings an automatic and certain payoff.

¹⁰² E.g., CRA Report, paragraphs 90 and 146-147. This alternative represents what I have termed the “Second Factual” (see Section V.9 below).

88. Consequently, the structure of the real world “game” in this circumstance is much different from and far more complex than the prisoners’ dilemma game would suggest. The prisoners’ dilemma, because it abstracts from a relatively simple situation that is not analogous to the complex marketplace realities that prevail in the banking, payment instruments and mobile wallet marketplaces, provides no useful insight into any “solution” to any possible marketplace dynamic or even any potential marketplace problem in this circumstance. Therefore, the relevant solution from the prisoners’ dilemma game – complete cooperation – is unlikely to be efficient in these circumstances.

V.9 Specific Problems with the Factual and Counterfactual Analysis

89. There are so many problems inherent in the factual¹⁰³ and counterfactual analysis of benefits and detriments in the CRA Report that the analysis is unsound and the conclusions drawn from that analysis are unreliable. In this Section I discuss some of these problems (i.e., the most significant ones) in detail.

V.9.1 *The Details of both the Factual and the Counterfactual are too Vague to be Useful*

90. The most basic problem encountered in the CRA Report is that the description of the factual and counterfactual circumstances are much too vague and imprecise in relation to numerous important parameters to provide a meaningful basis to compare outcomes so that benefits, to the extent there may be any, and detriments associated with the conduct proposed for authorisation could be identified and compared. For example, there is no information presented in the CRA Report as to how the factual and counterfactual would differ in terms of:

- a. The number of competitors. It is not clear that the counterfactual would result in any reduction in the number of mobile wallet competitors, as the CRA Report implies.¹⁰⁴
- b. Transaction fees paid by financial institutions for mobile wallet products. There is no information in the CRA Report, besides vague information that, in the counterfactual, it is possible that “excessive” transaction fees might be obtained by Apple,¹⁰⁵ to distinguish between the transaction fees that would prevail in the factual and those that would prevail in the counterfactual. Based on the information presented, and the fact that, in the UK, where interchange fees are regulated, Apple agreed to very low transaction fees,¹⁰⁶ it is possible that, to the extent there is any difference in transaction fees, they could be minimal.

¹⁰³ The CRA Report actually specifies two different factual alternatives, a factor that significantly undermines the asserted benefits and detriments identified in the Report. This subject is discussed in more detail below in Section V.9.2.

¹⁰⁴ CRA Report, paragraph 131.

¹⁰⁵ CRA Report, e.g., paragraphs 7 and 118-122.

¹⁰⁶ Authorisation Application, Attachment C.

- c. Transaction fees paid by consumers for mobile wallet products. The counterfactual assumes that Apple would not agree to allow financial institutions to pass any transaction fees charged by Apple to financial institutions through to consumers for use of Apple Pay.¹⁰⁷ However, there is no information in the description of the factual (or the counterfactual) about whether or to what extent any pass-through might occur. Nor is there any information on whether or to what extent consumers would be charged transaction fees for other mobile wallet products in either the factual or the counterfactual. Nor is there any analysis of any detriments that might be associated with pass through of transaction fees, particularly selective pass through (i.e., pass through for certain mobile wallet products but not others).
 - d. Exclusivity. The counterfactual assumes that Apple would retain exclusivity in access by Apple Pay to the NFC chip embedded within iOS devices.¹⁰⁸ The factual does not necessarily assume that Apple would forgo this exclusivity, although it does suggest that it is possible Apple might agree to waive exclusivity or would agree to some vaguely described modified exclusivity.¹⁰⁹ Consequently, there is no basis to assume whether and to what extent the factual and the counterfactual would differ in this respect.
 - e. Types and features of mobile wallet products. While the CRA Report asserts that innovation and investment and product quality for mobile wallet products would be higher in the factual than the counterfactual,¹¹⁰ there is no economic analysis that supports these claims. Consequently, there is no basis on which to determine whether and to what extent the products available in the factual (and the strategies for promoting those products) would differ from those in the counterfactual and the extent to which competition would differ between the factual and the counterfactual. As important, there is no information on the degree to which, if any, investment, innovation or quality would improve in the factual as compared with the counterfactual. This makes estimation of any purported benefits impossible.
91. These are but some of the more salient dimensions in which differences between the factual and the counterfactual are poorly described. In many cases, the differences are not described at all, but merely supported by assertions that there would be differences and that these differences would be sufficiently large to provide measureable benefits. Other dimensions include:
- a. The number of issuing banks that decide to join the cartel;
 - b. How negotiations in the factual, although confined to the issues of exclusivity, pass through and security, might have spill-over effects on other contractual terms;

¹⁰⁷ More generally, pass through is discussed in several paragraphs of the CRA Report, e.g., paragraphs 5, 33-34, 38, 116, 121, 151-160 and 166.

¹⁰⁸ CRA Report, e.g., paragraphs 3 and 84-85.

¹⁰⁹ See CRA Report, footnote 41. No factual foundation or industry experts are cited for the comments in the CRA Report on the likelihood of modified exclusivity.

¹¹⁰ CRA Report, paragraphs 112 and 124-131.

- c. Differences in mobile wallet adoption and usage rates;
 - d. Effects of the proposed cartel on other mobile wallet products, both proprietary and Third Party;
 - e. Differences, if any, in security standards;
 - f. Differences, if any, on fraud rates and risk allocation for fraud rates;
 - g. Effect, if any, on smartphone sales and smartphone brand sales shares;
 - h. Effect, if any, of using alternative means of implementing mobile wallet technology on competition between proprietary mobile wallet products and Third Party Mobile Wallet products;
 - i. Apple’s ability to vet non-Apple mobile wallet products that would have access to iOS device embedded NFC chips (assuming Apple agreed to this under the factual) and the impact on sales of non-Apple mobile wallet products.
92. Absent anything but, at best, vague information on the purported differences between the factual and the counterfactual on these and other dimensions, the existence and magnitude of potential benefits, if any, of the conduct proposed for authorisation is both uncertain and impossible to estimate with any precision. Certifying the competitive benefits as larger than any competitive detriments is not demonstrated through any rigorous economic analysis and would therefore be problematic from an economic perspective even if the problem of the existence of two factual alternatives did not exist. The problem associated with having two factual alternatives and its implications for determining whether the conduct proposed for authorisation is, on net, beneficial are discussed below.

V.9.2 There Are Two Factual Alternatives, Not One

93. The CRA Report identifies two distinct factual alternatives (i.e., in addition to the counterfactual). In both the proposed factual alternatives the Applicant banks are authorised to establish a cartel to negotiate with Third Party Mobile Wallet suppliers over exclusivity, pass-through and security issues. However, in the first factual alternative,¹¹¹ Apple and the cartel members are assumed to reach an agreement (although the terms of any such agreement, even on just matters related to exclusivity, pass-through and security, are unclear). Moreover, other critical details of any such agreement are also not clear:
- a. Which banks, if any, participate in the cartel beyond the four Applicant banks;
 - b. When any agreement is reached;
 - c. How the fact of pre-existing agreements between Apple and American Express and ANZ Bank for Apple Pay affects the incentives for Apple and the Applicant banks to reach an agreement (and affect the type of agreement that can be reached);

¹¹¹ CRA Report, e.g., paragraphs 4 and 91.

- d. What the effect is of an issuing bank cartel on the terms reached with other Third Party Mobile Wallet suppliers?
94. For example, the timing of any agreement could critically impact both the types of benefits (and detriments) and their magnitude. An agreement reached in the first few months of the proposed authorisation period would likely have different net benefits than an agreement reached in the last few months of the proposed authorisation period, all else equal.¹¹² The CRA Report does not include an analysis of any of these issues.
95. Complicating matters even further, the CRA Report specifies a second factual alternative. In this second factual, no agreement is reached between Apple and the cartel banks during the proposed three year authorisation period. Having specified this second factual, however, the CRA Report provides no information on the impacts of this factual on Apple, the cartel banks, the non-coordinating banks, consumers, merchants or other suppliers of Third Party Mobile Wallet products. The CRA Report also does not specify how such a factual alternative would impact innovation, adoption, quality, pricing or any other aspect of mobile wallet products.
96. One thing is certain, however, under the second factual. Unless the cartel were to be re-authorised by the ACCC (assuming of course the cartel were to be authorised in the first place), the cartel banks would find themselves in the same position as in the counterfactual, just three years down the track. Given the three year delay in signing agreements with Apple, a firm acknowledged in the CRA Report as a leader in developing and commercialising new products in a manner that has led to products that are successful in the marketplaces in which they compete,¹¹³ the second factual may well be worse in terms of net competitive benefits than even the counterfactual.
97. There is no information in the CRA Report that would enable one to determine with any precision the relative probabilities of the first factual or the second factual.¹¹⁴ One important factor in determining the relative probabilities is the degree to which incentives among the banks participating in the proposed cartel would be aligned. To the extent that they were not well aligned, agreement among them, all else equal, would likely be more difficult, increasing the probability of the second factual alternative occurring. The CRA Report does not address this issue (or other issues relating to the incentives/disincentives for each cartel participant individually and all cartel participants collectively to reach agreement) and, consequently, cannot provide a reliable estimate of the relative probabilities of the first and second factual alternatives.

¹¹² Of course, the net benefits (compared with the counterfactual) could be negative in either case.

¹¹³ E.g., see Section V.5 above.

¹¹⁴ The CRA Report (paragraph 90) does state that the first factual alternative is more likely than the second factual alternative, but provides no analytical basis for this view. In any case, even if the first factual alternative is “more likely” than the second factual alternative, there is no basis provided in the CRA Report on which to determine how much more likely it might be. Without more precision on relative probabilities, there is a possibility that the weighted average factual may, on net, provide negative benefits (i.e., net detriments) even if, for the sake of argument, it were possible that the first factual alternative, on net, had greater benefits than detriments (a proposition not demonstrated through economic analysis in the CRA Report).

98. However, even according to the assumptions contained in the CRA Report (e.g., that the first factual alternative would, on net, have greater competitive benefits than detriments), if the probability of the second factual alternative were sufficiently high, the weighted benefits of the two factual alternatives could still be on net less beneficial than the counterfactual. If one were, in addition, to factor in the problems trying estimate benefits and detriments given the vague nature of the characteristics of the first (and second) factual alternative, determining whether authorising the proposed cartel would provide net benefits (or any benefits) is virtually impossible. However, given the inefficiencies generally associated with cartel conduct, it is unlikely in my opinion that even the first factual alternative would provide net competitive benefits.

V.9.3 Other Problems with the CRA Report’s Views on Benefits and Detriments

99. There are several other problems inherent in the CRA Report’s evaluation of the competitive benefits and detriments associated with the proposed conduct. First, there is no analysis of alternative, less competitively restrictive (than a cartel), methods that might at least achieve some (or even all) of the benefits that the CRA Report associates with the first factual alternative (the second factual alternative may well have lower net benefits than the counterfactual, perhaps by a significant margin). Some of these less restrictive alternatives could be technological, such as attachable NFC chips, or use of NFC chips in alternative devices, such as smart watches or fitness bands. Another possible alternative would be to forgo the cartel entirely and implement an SSO-like process to negotiate security standards for Third Party Mobile Wallet products.

100. Second, the CRA Report presents no analysis at all that attempts, even approximately, to quantify the magnitude of any purported benefits nor any of the purported detriments associated with the proposed conduct. In place of such an analysis, the Report merely asserts that benefits exist and that they would outweigh any purported detriments.¹¹⁵ There is insufficient information in the CRA Report to verify any of these claims.

101. The reliability of these claims is even less certain because the CRA Report omits at least three likely significant detriments associated with the conduct that the Applicants propose that the ACCC authorise. The first of these detriments is the impact of the proposed conduct on non-Apple Third Party Mobile Wallet suppliers. While the CRA Report makes claims (erroneous in my view, because they do not accord with sound economic principles) that Apple is a “monopolist” over consumers that choose its brand (despite the fact that a significant proportion of consumers, even according to the information in the CRA Report, shift between smartphone operating systems, even in the short run), no such claims are made for Android Pay or Samsung Pay or any other Third Party Mobile Wallet product. Yet the proposed conduct would allow the cartel to negotiate jointly with these other providers as well. Even if cartel negotiations could be strictly

¹¹⁵ CRA Report, paragraphs 91-164.

confined to the three topics identified in the Authorisation Application, competitive detriments are likely in relation to these other suppliers (and these detriments are not mentioned in the CRA Report).

102. The second type of detriment not discussed in the CRA Report is the detriment associated with cartel behaviour. Economists recognise that cartels can result in significant inefficiency compared with the absence of a cartel.¹¹⁶ Even a cartel confined to negotiating on exclusivity, pass-through and security issues could impose costs (both explicit and implicit) on Third Party Mobile Wallet product suppliers so as to favour their own (i.e., the cartel members’) mobile wallet products over those of third party suppliers. There appears to be no consideration of this source of competitive detriment in the CRA Report (or of any potential for spillover from the topics authorised to other elements of any agreements between the cartel banks and any Third Party Mobile Wallet product suppliers).
103. More generally, given that the proposed cartel members are also competitors to Third Party Mobile Wallet product suppliers in the supply of mobile wallet products (in the sense that both banks and Third Party Mobile Wallet suppliers provide mobile wallet products), any actions by the cartel members to favour their own products could entrench less innovative, lower quality products. In other words, the existence of the cartel could provide an artificial advantage to the mobile wallet products of cartel members (i.e., an advantage they would not receive in the absence of the cartel). These effects are particularly likely in circumstances such as these where the cartel members have deep relationships with customers, who may exhibit considerable inertia in shifting away from the bank’s services and products (i.e., where customers are relatively resistant to switching their banking services provider).
104. One potential result of the combination of a banking cartel that could entrench advantages to its own mobile wallet products with the existence of a customer base that is relatively resistant to switching between/among banking services providers is a reduction in competition among banks. Adoption of more standardised Third Party Mobile Wallet products could reduce customer switching costs, thereby potentially increasing competition for customers in the banking services industry. This possibility is not evaluated in the CRA Report.
105. The third type of detriment not discussed in the CRA Report is the likelihood that the inefficient impacts of the cartel could persist beyond the expiration date of the authorised conduct. The inefficiencies associated with a cartel can persist beyond the demise of the cartel,¹¹⁷ but the CRA Report makes no allowance for this possibility.
106. There may be other detriments as well that are not considered in the CRA Report. For example, the banks’ customers could suffer harm even under the first factual alternative,

¹¹⁶ D. Carlton and J. Perloff, *op. cit.*, Chapter 5.

¹¹⁷ See, e.g., J. E. Harrington, Jr. (2004), *op. cit.*

if an agreement between the banks and Apple for Apple Pay is delayed significantly, particularly if customers have to, in the interim, utilise less capable mobile wallet products.

107. Finally, the CRA Report does not adequately consider potential detriments to Apple or its customers of the proposed cartel. If the cartel is successful in overturning Apple’s preferred strategy of maintaining its proprietary ecosystem, this may have an impact on consumer perceptions of Apple, which in turn could impair Apple’s image and even its sales. While there is no certainty that such detriments would occur, given Apple’s long-standing competitive strategy of maintaining a proprietary ecosystem in order to ensure the quality of the customer experience, it is not a detriment that can be arbitrarily dismissed.

V.9.4 Conclusions on Benefits and Detriments

108. The manifold problems with the factual/counterfactual presentation in the CRA Report – ranging from inadequate specification as to how outcomes for important parameters would differ to inadequate specification of what types of agreements would be reached (or even if they would be reached) between Apple and the banks and other Third Party Mobile Wallet suppliers and the banks to the lack of any analysis that would enable one to quantify, even in relative terms, benefits and detriments associated with the proposed cartel conduct – make it impossible to state with any certainty that the benefits of the proposed cartel conduct could outweigh the detriments, never mind that such an outcome would be likely.
109. Another significant aspect of the proposed cartel conduct that makes it even more likely to result in a net competitive detriment is the fact that the proposed conduct envisions a cartel whose members supply mobile wallet products to negotiate with third parties that also supply mobile wallet products. I am aware of no modern instance where an antitrust authority has sanctioned a cartel of some competitors to negotiate with other competitors.
110. Further complicating the analysis, two factual alternatives are specified, with one especially likely to result in detriments that outweigh any benefits. Given that no information is provided in the CRA Report to determine the probabilities associated with each factual alternative (other than an assertion that the first factual alternative is more likely to eventuate than the second factual alternative), one can only conclude that the proposed cartel conduct should, at least based on an economic perspective, not be authorised.

Attachment A

Qualifications of Christopher J. Pleatsikas

1. I, Christopher Jon Pleatsikas, am an economist, living in Santa Cruz, California. I have been a Managing Director at Berkeley Research Group and LECG, LLC, both global economics and business strategy consulting firms. I have also held the position of Vice President at CRA International, another global economic and business strategy consulting firm, as co-Director of the firm’s Asia-Pacific Competition Practice, based in Sydney. Previous to that, I have been a Principal at Putnam, Hayes & Bartlett (now part of PA Consulting) and a Manager of the Economic Analysis Unit at Price Waterhouse (now part of PricewaterhouseCoopers). I have also served as Lecturer/Distinguished Lecturer in the Economics Department of the University of California, Santa Cruz.
2. I received a B.A. from the University of Pennsylvania, as well as an M.S. in Natural Resources from the University of Vermont and an M.A. and a Ph.D. in Regional Economic Analysis from the University of Pennsylvania. In addition to teaching industrial organisation (antitrust economics) at the University of California, I have taught economics and quantitative methods at both the University of Pennsylvania and the University of Maryland.
3. My particular areas of expertise are industrial organisation, competition policy, regulation, and microeconomics. I have extensive experience in Australia, as well as in New Zealand, the United States and Europe, in competition (antitrust) analysis and competition litigation and in other litigation and strategic consulting assignments concerning damages analysis, contractual matters, intellectual property and contract disputes.
4. My work has included consideration of a wide variety of industries, including many high technology industries, with numerous assignments in payment instruments and mobile phone networks, equipment and technology. In Australia, I have been retained by private clients, the ACCC and State Governments. My work in Australia has included a large number of industries, including specifically mobile telephone equipment and technology and payment instruments.
5. More generally, my experience in antitrust analysis includes a wide range of matters, including (but not limited to) mergers and acquisitions, as well as allegations of monopolisation and attempted monopolisation, predatory pricing, raising rivals’ costs, price fixing and many other subject matters. I have testified before and/or submitted testimony to the Federal Court of Australia, the Australian Competition Tribunal and the Australian Copyright Tribunal, as well as state and federal courts and state and federal regulatory agencies in the United States and courts in New Zealand and the Republic of Singapore. The United Kingdom’s House of Lords has also sought my advice on competition matters relating to high technology/highly innovative industries.
6. I have authored and co-authored a number of papers. For example, I have authored and/or co-authored articles on market definition, dynamic competition, the competitive effects of long-term contracts, on predatory pricing and on the problems encountered in competition

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analysis. I am also editor of the “Report from North America,” a column on antitrust developments published regularly in the *Australian Journal of Competition and Consumer Law*.