

Strategic Review of Innovation in the Payments System: Conclusions

JUNE 2012

Contents

1. Overview	1
2. Innovation and Efficiency	3
3. Potential Gaps in the Payments System	6
4. Payments System Architecture	14
5. Payments System Governance	18
6. Summary of Conclusions and Next Steps	25
A Model for Real-time Retail Payment and Settlement Hubs	28

Reserve Bank

© Reserve Bank of Australia 2012. All rights reserved.

The contents of this publication shall not be reproduced, sold or distributed without the prior consent of the Reserve Bank of Australia.

ISBN 978-0-9872589-7-7 (Online)

1. Overview

This document sets out the conclusions of the Reserve Bank's Strategic Review of Innovation in the Payments System. The Strategic Review was announced in May 2010, with the objective of identifying areas in which innovation in the Australian payments system could be fostered through more effective cooperation between stakeholders and regulators. The focus of the Strategic Review is medium-term, looking at possible gaps in the Australian payments system that might need to be filled through innovation over a time horizon of five to ten years.

The conduct of this Review does not imply that there is a lack of innovation in payments *per se* in Australia. Indeed, some significant innovations are currently underway and it seems likely that customer-facing innovations will have a very significant impact on the payments market over the next few years. As has been stated on a number of occasions during the course of this Review, the Reserve Bank's focus is on areas of system-wide or cooperative innovation, where decisions are not just in the hands of a single player. Innovations of this nature have proved difficult to achieve. While a significant concern in its own right, the difficulty of achieving cooperative innovation also constrains the innovative solutions that can be built upon common systems by individual players on a proprietary basis. Therefore addressing these issues has the potential to unlock significant future innovation, resulting in ongoing improvements to the efficiency of the payments system.

The conclusions outline a change in approach by the Payments System Board in relation to payments innovation. In recognition that there are impediments to the payments industry collectively delivering solutions that would be valued by businesses and consumers, the Board intends to be more proactive in setting out strategic objectives for the payments system, that is, its expectations for the services that the payments system should be able to offer in the future. The Board believes that this will help to overcome some of the coordination problems that have been evident in the payments system over the years. The paper sets some initial strategic objectives: same-day settlement of Direct Entry (DE) payments; early progress towards real-time retail payments; availability of payment systems out of normal banking hours; the ability to transmit additional remittance data with payments; and the ability more easily to address payments.¹ While not wishing to dictate how the strategic objectives are met, the paper also outlines the Board's thinking on a possible approach to architecture for providing real-time payments.

The Bank envisages an ongoing role in relation to innovation. In particular, processes flowing from the Strategic Review will require significant dialogue over the coming months and years. Most importantly, the Board proposes that there be regular and ongoing engagement between it and the industry on strategic objectives and other industry issues. In order to facilitate this, it proposes that the Bank work with the industry

¹ 'Real-time retail payments' in this paper refers to 'credit transfers' that can be initiated by the payer and provide funds availability to the payee in real time. There are existing systems (in particular for card payments) that provide real-time authorisation of retail 'debit transfers', but these are largely only available for payments to merchants and funds availability might lag significantly.

on constituting an enhanced industry coordination body that would engage directly with the Payments System Board.

This paper is the fourth issued during the course of this Review. It follows *Strategic Review of Innovation in the Payments System: Issues for Consultation* (Issues for Consultation), the Bank's 2010 Consumer Payments Use Study and *Strategic Review of Innovation in the Payments System: Summary of Consultation* (Summary of Consultation).² The Review has drawn extensively on two rounds of public consultation, along with the activities of the BIS Committee on Payment and Settlement Systems (CPSS) Working Group on Innovations in Retail Payments.³

The discussion through the course of the Review has tended to be divided into consideration of: specific potential gaps in the payments system; architecture arrangements appropriate to fill the gaps identified; and industry governance arrangements to underpin future innovation. Sections (3, 4 and 5) of this paper follow those themes. Before addressing those issues, however, Section 2 focuses on the relationship between innovation and the Board's mandate. Section 6 summarises the conclusions and outlines the next steps.

2 See Reserve Bank of Australia (2011), *Strategic Review of Innovation in the Payments System: Issues for Consultation*, June, available at <<http://www.rba.gov.au/publications/consultations/201106-strategic-review-innovation/issues/pdf/201106-strategic-review-innovation-issues.pdf>>; Bagnall J, S Chong and K Smith (2011), 'Strategic Review of Innovation in the Payments System: Results of the Reserve Bank of Australia's 2010 Consumer Payments Use Study', June, available at <<http://www.rba.gov.au/publications/consultations/201106-strategic-review-innovation/pdf/201106-strategic-review-innovation-results.pdf>>; Reserve Bank of Australia (2012), *Strategic Review of Innovation in the Payments System: Summary of Consultation*, February, available at <<http://www.rba.gov.au/payments-system/reforms/strategic-review-innovation/summary-consultation/pdf/summary-consultation-2012.pdf>>.

3 Australia participates in the Working Group on Innovations in Retail Payments, which issued a report, 'Innovations in Retail Payments', in May 2012.

2. Innovation and Efficiency

The conclusions of the Strategic Review represent a change in direction for the Payments System Board in relation to innovation. While the Board has sought to help shape industry developments in a number of areas over the years, it has not sought to play any formal role in respect of innovation. This has reflected an assumption that innovation is best driven by market forces. In deciding to take a more active role, the Board is guided by two factors. First, it is satisfied that there are some market failures that may prevent innovation in the payments system. In other words, market forces might not be sufficient to produce some types of innovation that are in the public interest. Second, it believes that innovation is important to its mandate, that is: controlling risk; promoting efficiency and promoting competition in the market for payment services.⁴

The market failures that can hold back innovation were discussed in both 'Strategic Review of Innovation in the Payments System: Issues for Consultation' and 'Strategic Review of Innovation in the Payments System: Summary of Consultation'. In large part they consist of coordination problems that make it difficult for industry players to agree to implement an innovation that requires collective effort to succeed. It is also possible that existing commercial arrangements might make it difficult to build a business case, for instance because new services will attract business away from existing profitable business streams.

Regardless of any market failures, the Board would not have undertaken this Review had it not considered there to be a strong link between innovation and its mandate. Innovation can potentially benefit competition and the management of risks, but its most obvious benefits are in terms of efficiency. Several related concepts of efficiency are relevant, but this Review is principally focused on allocative efficiency, which refers to the characteristic that goods and services are produced so as to best match consumers' needs, taking into account their relative costs, and dynamic efficiency, reflecting the need for firms to make timely changes to production methods and products/services in response to changes in consumer tastes and in productive opportunities.⁵

It is the Board's view that the market failures noted above have meant that decisions about the payment services provided by the industry have not sufficiently accounted for some key factors valued by end users. For consumers, the availability of alternative or improved payment services might result in greater welfare through, for instance, greater convenience, savings in time, or certainty about the availability of funds. For a business, benefits would typically flow from greater efficiencies in their own systems arising from more appropriate payment options and improved cash flow associated with more timely availability of funds. For instance, significant use continues to be made of cheques, which can be very costly for businesses to process. If greater resources were directed towards electronic payment methods that better provided the features of cheques, business payment costs – particularly in industries that rely heavily on cheques – could be reduced significantly.

4 Consistent with the overall stability of the financial system. *Reserve Bank Act 1959*, section 10B.

5 Independent Committee of Inquiry (Hilmer Committee) (1993), *National Competition Policy*, Australian Government Publishing Service, Canberra.

While greater efficiency is expected to be the primary outcome of the Review, the Board believes that the approach to innovation should at all times be tested against competition considerations. Industry-wide innovations should to the extent possible provide fair and open access to potential participants and proprietary innovation should not be used as a tool for the exercise of market power. The Board believes that some of the innovations discussed in this paper have the potential to provide a more competitive environment in facets of the payments system than has existed in the past. It will seek to ensure that these changes in the environment eventuate.

2.1 Key Attributes of Payment Systems

In its Issues for Consultation paper, the Bank articulated a number of attributes valued by end users of the payments system. These provide an indication of the type of payment system features that have the potential to provide efficiency gains as discussed above.

Attributes valued by end users include the following.

(i) Timeliness

Timeliness has at least two elements. In some cases, such as emergency government payments, the timing of the availability of funds to the recipient is critical. In other cases, such as point-of-sale or online purchases, it is important that the merchant has immediate confirmation that the payment has been authorised and funds will be received, even if they will not be available until some later time. With this knowledge the transaction can be completed and goods or services supplied. This is an existing capability among a number of retail payment instruments.

(ii) Accessibility

Ideally, everyone who needs to make and receive payments should have ready access to the payments system. This includes the ability to access the payments system when and where required and to be able to make payments to whomever required. Innovations over recent years have dramatically improved access, with first telephone, then internet banking, and more recently mobile banking and payments. Another element of accessibility is the availability of accounts through which payments can be made and received. Australia has a highly banked population, which means that access to financial institution-based payment methods is ubiquitous.

(iii) Ease of use

Ease of use can reflect factors such as the number of steps in the payment process, the amount of information that must be provided (such as account and BSB numbers), and the process by which it is provided (for instance by manual entry or by use of a card). These might not simply be issues of convenience; they might also contribute to errors that can be costly to correct and can discourage use.

(iv) Ease of integration with other processes

Payments are often made as part of a process that requires some form of information exchange and reconciliation. Payment systems should be able to integrate efficiently with these processes. Key examples are the capacity of payment systems to carry additional information relevant to the payment and the ability of payment messages to be easily integrated with accounting and other business systems.

(v) Safety and reliability

End users of a payment system need to have confidence that the system will be available when expected and that payments will reach the intended recipient at the time promised. They also need to be confident that the system is secure, so that using it will not expose them to future losses as a result of information being fraudulently obtained.

For any given set of attributes, the payment service should be provided at the lowest resource cost to the system as a whole. Pricing arrangements should be such as to encourage cost-effective deployment of resources in this sense.

The Issues for Consultation paper also identified low and transparent prices among the attributes valued by end users. This does not necessarily contribute to efficiency, however. Given the two-sided nature of payment systems, prices are often skewed in favour of the party with the greatest decision-making power. For instance, the price faced by a cardholder for a credit card transaction tends to be very low or negative and does not reflect the resource costs of providing the payment. In this case consumers' decision-making might not lead to the most efficient use of resources.

While the attributes above can enhance welfare, the Board does not wish to suggest that they need to be provided in equal measure (or indeed at all) by each system. A system that could provide all of the above attributes may well be prohibitively expensive. Rather, if an end user of the payments system has a demand for a particular attribute, the Board believes that attribute ought to be available in at least one system. It is also possible that the attributes will be available in varying degrees in different systems, such that an end user might be able to trade off attributes, for instance balancing the speed of funds availability against the quantity of data that can be carried. Accordingly, end users should have access to a menu of payment options (including at different costs) that will allow them to best meet their particular needs. The ability to do this is a measure of the efficiency of the payments system.

3. Potential Gaps in the Payments System

With the above discussion as background, the Board has identified several areas where it considers there to be existing or potential gaps that need to be addressed for the payments system to continue to adequately meet the needs of end users over the medium term. These are set out in this section. In most cases, these gaps are not new; they have been well known and understood by the payments industry for some time. The task for the Board and the industry is now to find ways in which they can be addressed.

3.1 Real-time Payments

The ability of individuals, government agencies and businesses to make retail payments, with the recipient having visibility and use of those funds in near to real time, is an objective that seems likely to become more pressing. Indeed, one of the key trends identified by the CPSS Working Group on Innovations in Retail Payments was an increased focus globally on speeding up payment processing through faster settlement or payment initiation.⁶

The capacity for real-time retail payments could be used by government agencies to make emergency payments, by individuals to make personal payments and potentially by businesses to make better use of cash balances. Some financial institutions have recently been promoting various elements of real-time payments, including the capacity to make real-time mobile payments to customers of the same bank. To the extent that this is valued by customers, it makes sense that this type of functionality should be available across financial institutions. Some institutions are also now promoting the faster availability of funds to merchants.

The Summary of Consultation paper dealt with the various elements that contribute to real-time payments. These are set out below.

(i) Timing of clearing

Clearing is the exchange of payment instructions between payment system participants. The timing of this activity is important and varies depending on the payment instrument used. In the DE system, payment instructions are batched and exchanged in bulk files between system participants at established intervals. Currently this occurs five times a day, although the largest share of payments occurs late in the day and is processed overnight. These discrete intervals prevent the timely crediting/debiting of funds because the recipient financial institution (for a direct credit) is unaware of the payment until the files are exchanged. Card payment systems, however, are based on real-time clearing, with separate messages exchanged for each payment. Payment instructions are exchanged between the merchant's bank and the cardholder's

⁶ Bank for International Settlements Committee on Payment and Settlement Systems (2012), 'Innovations in Retail Payments, Report of the Working Group on Innovations in Retail Payments', May.

bank in real-time, confirming that funds or sufficient credit are available before a message is returned to authorise the payment.

(ii) Timing of funds availability in banks' systems

The receipt of payment instructions does not necessarily dictate the timing of funds availability to the recipient of the payment. Historically, funds have not been available until the following business day, although with improvements in financial institutions' systems, within-day availability is becoming more common and a point of competition between institutions. The time it takes the sending institution to submit a payment instruction to another institution is clearly also an important factor.

(iii) Timing of settlement

Traditionally, the availability of funds to the recipient has in many cases been linked to the settlement of funds between financial institutions. The latter has historically occurred on the business day following payment clearing, so that interbank settlement and funds availability were often closely linked in time. With the trend towards within-day availability of funds, funds availability is moving ahead of interbank settlement, meaning that some financial institutions are providing credit to the funds recipient until interbank settlement occurs. This introduces a risk that the paying institution does not settle, or does not settle on time, even though the funds have already been credited to the receiving institution's customers. This risk is most relevant to the DE system, where some high-value payments are sent in preference to using real-time gross settlement (RTGS).

There can also be a lag between interbank settlement and funds availability for the customer. For instance, even in the existing high-value RTGS system, there can be significant disparities in the delay between interbank settlement and funds availability to the customer, with no industry obligation to make funds available earlier than the next day. Lags of this type could reduce the effectiveness of a system that allowed faster interbank settlement of real-time retail transactions.

Given these different aspects of payment timing, there are various ways in which faster retail payments can occur. One partial approach being explored in Australia at the moment is the settlement of DE files when they are exchanged.⁷ This would mean that funds could be made available to the recipient soon after the exchange (if the institutions' systems are capable), without the institution taking on credit risk. The industry is currently working towards settling three of the five daily file exchanges in this way, though this does not cover the bulk of the value processed through the DE system. The Board believes that same-day settlement should be extended to all DE exchanges. However, even if settlement occurs with each exchange and funds are made available to the customer immediately, there would typically still be a delay of some hours between initiation of the payment and funds availability because payment instructions are exchanged in batches. Real-time clearing of payment instructions is a necessary condition for real-time payments.

The approach taken in some other systems, including the Faster Payments Service in the United Kingdom, is to provide real-time payments via a combination of real-time clearing, several intraday settlements and the provision of credit by receiving institutions between settlement periods.

⁷ The DE system is the system used predominantly for the exchange of batch or bulk payment files. This may include salary, welfare or dividend credits or direct debits for bill payments. Internet banking transfers are typically also processed through the DE system. Files are exchanged between institutions five times per day (or less frequently, depending on whether an institution uses an agent for file exchanges with payment system participants), with interbank settlement currently occurring the following morning.

Box A

Overseas Systems for Achieving Timely Retail Payments

A number of retail payment systems have been introduced in recent years (or existing systems reformed) to allow funds to be accessed in a more timely fashion by recipients, in some cases within minutes, if not seconds.

Some systems have facilitated this by making funds available before interbank settlement. Typically, the system will also introduce measures to mitigate interbank credit risk. For example, the UK's Faster Payments Service (FPS), Japan's Zengin system and Korea's Electronic Banking System use net debit caps, which limit each participant's net debit position during a clearing session, and have loss-sharing arrangements backed by collateral. Some systems, such as the FPS and South Africa's Real-time Clearing (RTC) system, place upper limits on the value of individual transactions.

Another means of achieving more timely payments has been to increase the frequency of interbank settlements. In systems that do not provide funds before interbank settlement, such as India's National Electronic Funds Transfer system, more frequent interbank settlement gives recipients faster access to transferred funds. In systems that provide funds before interbank settlement, such as the FPS, more frequent settlement reduces the extent to which interbank credit risk can accumulate. In addition, some countries, such as Mexico and Switzerland, use their high-value interbank payment system to process retail payments. In these systems, recipients have very fast access to transferred funds without interbank credit risk.

3.2 Payments Out of Hours

As noted above, it is desirable that the payments system be available when and where needed by users. There is little doubt that accessibility has increased greatly in Australia over recent decades, starting with the introduction of ATMs and more widespread availability of card payments in the 1970s and 1980s. In 1997, BPAY provided consumers with a means of paying bills out of normal banking hours, initially by phone, and more recently internet banking has enabled consumers to relatively easily initiate BPAY and 'pay anyone' payments at any time of day. Some card payments can easily be made from a consumer's home via the internet, albeit with a trade-off in security. The widespread adoption of smartphones means that constraints on the physical location where electronic transactions can be initiated have also been eased.

In the Board's view, the one area of accessibility that is clearly lagging is the availability of low-value payment systems out of hours, particularly during weekends and public holidays. Elements of some systems continue to operate during these times; for instance, the clearing of card payments continues to operate, consumers can initiate 'pay anyone' or BPAY payments via online or phone banking, and of course ATMs continue to operate. However, the systems used for the exchange of non-card payment instructions between institutions do not generally operate on weekends, meaning that no DE files are exchanged between banks and no interbank settlement occurs. Banks' accounting systems also do not generally recognise weekends for account posting purposes. Together, these factors mean that the recipient of a DE payment initiated after a bank's cut-off time on a Friday night might not receive those funds until Tuesday. The same might be true for a merchant accepting a payment via eftpos on a Friday night. These delays are of course longer during long weekends.

Some financial institutions have recently begun to settle funds to merchants seven days a week for eftpos transactions. While this is a positive development for merchants, as discussed in the previous section, it is only

possible through the provision of credit, given that interbank settlement does not occur until later. This implies an increase, albeit modest, in risk. It also has implications for competition because some participants in the payments system do not have a balance sheet that would allow them to easily extend credit.

The Board considers that this situation is out of step with broader developments in our society and economy, where more and more services are expected to be available seven days a week. Such trends are likely to continue and the retail payments system should be able to support them. The posting of DE payments ought to be possible over weekends and public holidays and merchants' access to the proceeds of card payments would sensibly also be available. Of course any real-time retail payments system, as discussed in the previous section, would be expected to be available continuously. While these types of outcomes have been achieved overseas without requiring interbank settlement during weekends, the Board's view is any solution should be competitively neutral. The Reserve Bank will enhance its RTGS system – the Reserve Bank Information and Transfer System (RITS) – to extend interbank settlement capability as required to support these initiatives.

Some submissions in response to the Issues for Consultation paper have outlined a number of complexities that might result from extended operation of payments systems, including for instance the effect on available maintenance and housekeeping times for financial institutions. These and no doubt other issues would need to be worked through with the industry, but the Board does not anticipate any insurmountable constraints on achieving this objective.

Box B

Extended Availability of Payment Systems

Some real-time retail payment systems, such as the UK's Faster Payments Service (FPS), South Africa's Real-time Clearing (RTC) system, Korea's Electronic Banking System (EBS) and Canada's Interac e-Transfer system, can be used to initiate transactions and make funds available to the recipient 24 hours a day. In these systems, recipients can access funds from transactions whether or not the interbank settlement system is operating. As discussed in Box A, systems use a variety of risk-management techniques to manage interbank credit risk, including net debit caps and transaction limits. The RTC system has an additional safeguard of applying lower transaction limits when the interbank settlement system is not operating.

3.3 Transmission of Data with Payments

The Board considers that providing the capacity to carry additional remittance information with payments could result in a significant improvement to business efficiency. This aligns with the 'ease of integration' attribute above.

As discussed in earlier documents from the Strategic Review, this issue is most readily applicable to the DE system, which is the principal business payment system, although there is no reason that other systems could not seek to meet a similar need. DE messages can currently carry a maximum of 18 characters of additional remittance data with the payment message. This is insufficient for many business purposes, and can also be a constraint for personal use. Businesses might for instance wish to incorporate detailed information about an invoice, for example an indication of which items on the invoice are being paid.

In the absence of a solution to this issue, businesses use other payment methods, predominantly cheques, because they can be accompanied by an unlimited quantity of data in paper form. Alternatively, many businesses separate the payment and the remittance information and these must be reconciled at some cost at a later time.

Potential solutions to allow provision of basic remittance information with payments are set out below. One is to adopt payment messages that allow additional data to be incorporated. ISO 20022 message standards, which provide the flexibility to incorporate a significant quantity of data, are being adopted in many countries around the world and there is a general presumption that they would be considered for any new system. The Australian Payments Clearing Association (APCA) has set out a schema for use with domestic systems.

A second option is to handle remittance data separately, but provide a short reference to those data in the message itself, so it can be accessed by the message recipient. This has the advantage that very large quantities of data or other information, such as copies of invoices (i.e. beyond basic remittance information) can also be handled without placing additional loads on the payments system or requiring financial institutions to store and forward this bulky information.

A key problem faced by the Australian system is the starting point. The DE system is very well established, inexpensive and ingrained in business systems. Altering the system to carry additional remittance data could be expensive for both financial institutions and businesses alike, but the additional functionality provided would be of benefit for only a subset of payments. Several approaches for DE payments are possible:

- Incorporating references in the existing 18 character reference field to an external location where a larger quantity of data (potentially over and above basic remittance information) can be stored. This is minimally disruptive and is already being provided on a proprietary basis for some types of payments.
- Establishing of a separate system/clearing stream that would use ISO 20022 messages containing fields for basic remittance information, over and above the basic 18 characters available through the existing DE system. Requirements for larger amounts of remittance information (e.g. copies of invoices) would need to be met by use of external information warehouses.
- Providing a service that could translate between existing DE messages and an ISO message standard incorporating additional data.

These options are not mutually exclusive and given entrenched use of DE, it is probable that progress on this matter may require elements of each, with significant consideration to be given to the migration strategy. The barriers to innovation are typically lower when participants and users can opt-in at a time that suits their needs, although this might make it more difficult to exploit network effects. Staggered migration would be possible in each case, but complexity would be increased by the need for system users to know which parties are capable of sending and receiving enhanced remittance information. Migration to a new ISO 20022 payment message standard would be assisted by provision of a translation service.

An alternative or complementary approach might be to provide the richer data capabilities as part of a new real-time retail payment system. The DE system would continue to service payments that are sensibly batched and require less remittance information. As noted later in this paper, it will be important to maintain investment in this important payment system.

Box C

ISO 20022 Overseas

ISO 20022 messages are increasingly being adopted in retail payment systems overseas. The European Payments Council uses ISO 20022 messages for the Single European Payments Area (SEPA) project; it will be required for all direct debit and credit transfer systems in the coming years as a part of regulations imposed by European legislators. ISO 20022 messages have been an option in Japan's Zengin system since November 2011. Canada, Singapore, Sweden and Switzerland, amongst others, are considering the use of ISO 20022 in upgrading existing retail systems or as the basis for new systems. The International Payments Framework Association is using ISO 20022 to support interoperability of retail payment systems to initiate cross-border payments.

3.4 Addressing of Payments

A key element determining the ease of use of a payment system is the process by which the payee's details are provided by the payer. Currently, in order for a payment to be made into a bank account, the payee's BSB number and account number must be provided. In many cases, individuals will not remember these details themselves and in other cases individuals are reluctant to provide them because they are concerned that they might somehow be used fraudulently. The need to correctly enter up to 15 digits is a further problem. Errors are easily made and the consequences can be uncertain. It is likely that these concerns are the reason that some people are reluctant to make electronic payments and have resulted in significant costs in dealing with payments that have been made incorrectly. The Board therefore believes that an easier means of addressing payments could improve the efficiency of the payments system. It may also have a by-product of increasing competition in the provision of financial services to the extent that it makes it easier for customers to switch accounts between financial institutions.

While other solutions might be possible, one approach to simplifying addressing is to use an identifier – for instance a phone number – that can be associated in a database with a person's full account details. Such a database would most likely be held centrally, although conceptually it could be replicated across multiple financial institutions. There are precedents for both approaches in phone carrier switching arrangements, but the use of a central database associated with a hub is likely to be more efficient. Security considerations would be very important in the design and operation of any account identifier system.

In broad terms the BPAY system uses an approach similar to that above to allow payment to billers via a six digit biller code. The collapsed MAMBO project would have extended this approach to a much wider range of users.

Box D

Addressing Payments in Other Countries

A number of other countries have implemented systems for easier addressing of payments between bank accounts. For instance, Vocalink is constructing a central database (expected to be completed by the end of 2012) to allow UK consumers who are registered to the service to use mobile phone numbers to address person-to-person payments through the Faster Payments Service or LINK. In the US, clearXchange (a joint venture between several banks) allows person-to-person payments from existing bank accounts at participating institutions using only the recipient's mobile phone number or email address; funds move through the automated clearinghouse system. In India, the Interbank Mobile Payment Service uses a unique identifier, similar to a BPAY code, to link a customer's bank account number to their mobile phone number to facilitate payments through a mobile application or SMS.

3.5 The Way Forward

The Payments System Board considers that the payments industry should be aspiring to address the above four areas over the coming years. It therefore believes that finding solutions to the above gaps should form the basis of an initial set of industry strategic objectives. This will be discussed further in Section 5.

3.6 Other Issues

Many other issues have been discussed during the course of the Strategic Review. Not all can be addressed here and the fact that many have not been does not mean that these are not of interest to the Board. It is to be hoped that the processes established as a result of this Review will provide an avenue to address some of these issues in the future if they become pressing.

There were, however, three issues that had some prominence during the Review, for which no specific additional action by the Bank is proposed – cheques, standards and mobile payments. The Board's conclusions on these issues are set out briefly below.

3.6.1 Cheques

The Board's consideration of cheques has occurred in parallel with an industry debate on the future of cheques. This debate has covered approaches to declining cheque use that range from naming a date when cheque clearing would cease to making cheque processing more efficient so that the system is sustainable at lower cheque volumes. The debate has moved relatively quickly and the industry is actively pursuing the latter course, along with measures to promote adoption of electronic alternatives to cheques. Details are provided in 'The Decline of Cheques: Building a Bridge to the Digital Economy', published by APCA in May 2012. The Board supports this approach given that cheques currently provide some features that are not well replicated in electronic systems, such as ease of addressing. The Board believes that the initiatives discussed in this paper will help electronic payments to bridge that gap.

3.6.2 Standards

The adoption of international standards is beneficial to efficiency through the compatibility and interoperability it provides. Standards can cover a number of areas, but the main focus during the Review has been message standards, and in particular the ISO 20022 framework being increasingly adopted internationally. The Board believes that there is now widespread acceptance that any new system should be based on the ISO 20022 framework and supports this presumption.

As discussed in Section 4, the Reserve Bank could provide functionality that may assist migration of DE payments to an ISO 20022 compliant standard.

3.6.3 Mobile payments

The previous papers discussed different models of mobile payments, postulating that in Australia mobile internet and near-field communication (NFC) would be the main channels used for retail payments. While the industry has yet to coalesce around a specific model for providing NFC-based payments, no strong case has been made to the Bank that any intervention is appropriate.

Mobile internet payments are likely to take many paths, with some innovative offerings that provide a much richer interaction between the merchant and the customer already starting to emerge. The Board's key focus is to seek to ensure that the underlying infrastructure of the payments system best supports future innovative products. This includes providing the capacity for real-time retail payments, the transmission of larger quantities of data, and systems for simplifying addressing of payments.

3.7 A Note on MAMBO

The approach taken in this paper will inevitably draw comparisons with 'Project MAMBO' which was being developed by the major banks and BPAY until mid 2011. MAMBO had the potential to offer a number of features that have been supported in this document. That does not necessarily mean that MAMBO was the 'right' solution nor that the banks were mistaken in withdrawing from the project. It does however illustrate the difficulties with cooperative innovation and building a commercial model that appeals to all players for a major investment project. It is quite possible that benefits similar to those delivered by MAMBO might have been provided at less cost if delivered in a different way, perhaps by different systems. It is also possible that a different business model might be required, or perhaps that such central services are best provided as a utility, rather than on a commercial basis.

4. Payments System Architecture

Payments system architecture is the set of physical and logical structures that allow institutions to exchange payment instructions, initiate settlement and perform any additional functions associated with a payment. Payments system architecture is of interest to this Review for two reasons. First, it is relevant to how well and how easily the types of gaps identified in the previous section can be addressed. Second, some forms of architecture appear to be more conducive to innovation than others.

Traditionally Australian payment systems, such as Direct Entry, ATMs and eftpos, have been thought of as bilateral, with physical bilateral lines between pairs of participants, bilateral agreements about how messages are secured, transmitted and processed through those lines, and bilateral business agreements to exchange a given type of payment and potentially also pricing arrangements. By contrast, many systems around the world (and some operating in Australia) operate via a central hub, with all messages passing via the hub to the recipient. This is more efficient, as a new entrant needs only to connect to the hub, rather than establishing separate connections to each individual participant – a task that increases with the size of the industry.

Recently the distinctions between these models have been blurring as internet protocol (IP) technology allows communication to multiple counterparties via a single connection to a network. A recent example of this was the implementation of the industry Community of Interest Network (COIN) in Australia. While this reduced the number of physical network connections (from one for each partner, to one set for the COIN), the overhead of separate bilateral system connections (e.g. file transfer protocols, naming conventions, security connections etc.) between all participants remains. Business arrangements also need to be agreed, so governance becomes relevant. These elements could be agreed bilaterally, standardised through industry agreement, or governed by a central entity.

The Summary of Consultation paper identified three possible roles the Bank sees for centralised architecture in Australia:

- **Simplifying connections.** The greater the extent to which physical, logical and business arrangements are centralised, the simpler will be access for new participants and the better the environment for competition and innovation.
- **Enabling additional processing functions, to provide more sophisticated payment products or greater interoperability.** A hub could perform functions as varied as: splitting and distributing bulk files; conversion between message formats; fraud detection; the association of identifiers with account details (to facilitate easier addressing of payments or account switching); or holding data centrally that can be referenced in payment messages.
- **Facilitating real-time, or near real-time settlement of retail transactions.** Real-time or near real-time settlement of retail transactions would likely require centralised architecture to process large volumes of payments for settlement in RITS.

The Board believes that there should be a general presumption in favour of establishing more centralised systems when the opportunity arises, particularly in the establishment of new systems. However, for the purposes of the current Review its focus is on any architecture solutions that are necessary to address the gaps identified in the previous section. The Board considers that the possibility of advances is most apparent in two areas – the DE system and real-time payments.

4.1 Direct Entry Arrangements

The DE system is the key system for most business payments, providing bulk payments, such as salaries and regular bill payments, along with one-off payments. The system is well-established and inexpensive, but in most cases has attracted little investment in upkeep over the years.

Submissions to the Strategic Review have typically recognised the case for addressing the gaps identified in the preceding section and many have focused on the role the DE system would play in doing so. A number of submissions suggested that the DE system would not be the right starting point and that an entirely new system, dubbed DE2, was needed. They argued that this would be the least disruptive approach to both system participants and businesses, and would allow those businesses that had a need for new services to access them.

The Board concurs that addressing some of the gaps discussed above would require the establishment of a new system, as discussed in the next section, but it also believes that there is scope to enhance the services that can be offered by the existing DE system. The architecture that has been developed by the Reserve Bank to link the COIN with the SWIFT network for the exchange of bulk files means that all participants exchanging files link to the Reserve Bank. The Reserve Bank is considering enhancements to this 'Low Value Clearing Service' (LVCS) to perform additional 'hub' functions, including those that would allow the DE system to better meet some of the gaps identified above. For instance, the system could in the future be capable of accepting a single file that contains payments to be cleared with multiple institutions; the LVCS could also split and sort this into individual files for exchange and generate settlement instructions to RITS. If a new ISO 20022 message standard was adopted, the Bank would provide a translation service that converts ISO 20022 messages to the existing DE standard and vice versa. This has the potential to allow progressive migration to richer standards, reducing the cost of migration. Consideration would need to be given to how this migration could be managed, for both system participants and end users.

There would be potential over time for the Reserve Bank to deliver further processing functions for bulk files, as appropriate.

One issue that has been the subject of some discussion of late is the potential for same-day settlement of DE files. The industry is currently working towards same day settlement for the first three file exchanges each day. This does not cover the majority of the value processed through the system. In the Board's view, the industry should move expeditiously to same day settlement of all five exchanges. This will reduce risk and allow end users to receive access to funds without the need for an extension of credit.

4.2 Real-time Payments

The Board considers that enhancements to the DE system could deliver important benefits for the payments system at a relatively modest cost. However, this solution is only appropriate for bulk files, which by their nature are exchanged in relatively low volumes and are not time critical (e.g. payroll payments). The Board believes that an adequate solution for real-time payments will require a new system, based on real-time clearing of

payment instructions. To complement this, the Reserve Bank is prepared to contemplate establishing a system for real-time settlement of retail transactions.

As discussed in Section 3, real-time payments require at a minimum real-time clearing, the capability for real-time posting of funds by institutions, and the ability for participants to provide credit. The latter constraint can be removed if real-time settlement is available. As noted in section 3, the Reserve Bank is prepared to extend interbank settlement hours as required to support payment system innovation.

The Board believes that the critical element of real-time messaging should logically be provided via a payments messaging hub ('payments hub'), which could readily accommodate a large number of participants in an efficient manner. Importantly, a hub would also be able to provide additional processing services, including holding a database of account identifiers and potentially accommodating remittance data. Ideally, the governance arrangements for such a system would provide open access and allow decisions about the design and operation of the system to be made in an efficient manner.

The Reserve Bank believes that such a system could be linked to a system providing real-time settlement of retail transactions. The ability to do so would remove the need for participants to provide credit in order to provide funds in real-time to end users. This implies a reduction in settlement risk for participants compared with a deferred settlement system. A second benefit of the removal of the need to provide credit would be to facilitate participation by entities that would not be in a position to provide credit.

A real-time retail *settlement* system would be established as a separate module of RITS, receiving settlement instructions from the *payment* hub, which would process individual payment instructions from financial institutions. The system might settle using liquidity reserved by institutions for retail settlements, with exchange settlement account balances and the funds available for retail settlements updated periodically. This system would be available for the same hours of operation as the message hub.

There are potentially a number of ways that a payments hub or hubs could be delivered, which might encourage competition and innovation in different ways. A single hub could be provided, either as a commercial entity or as a utility, or multiple hubs could be provided commercially, linking to the settlement hub and competing with one another. The Board considers that universal access by account holders should be an important principle underpinning the system. Therefore, if multiple hubs were provided, this would need to occur in a way that provided interoperability. The Board's presumption is that a single hub would be most efficient.

For a single hub, the objective would be to provide open access to the hub's core functions at a reasonable cost. Participants would then be able to compete over the services that can be offered to end users through a variety of delivery channels. The hub could potentially support several different payment systems, all achieving real-time settlement. While it would be desirable for a basic credit transfer message to be available to all customers, the hub could potentially accept multiple message types to support different types of activities, provided that some core elements were present. This means that more specialised payment systems could also make use of the hub.

A single hub could be run on a commercial basis or as a utility. As suggested in one submission, a commercial entity might be more responsive to development opportunities over time, but might be inclined to exercise market power if it became successful. It is also possible that the establishment costs and the need to achieve sufficient network size to be viable might make the business case for a commercial entity difficult. This suggests Reserve Bank ownership and operation as one possible model. A hybrid approach suggested

in some submissions is for the Reserve Bank to initially establish the system, which could subsequently be transferred to a private entity once it reached sufficient scale. The Board's preliminary view is that a hub of this type would be best operated as a utility, owned either by the industry or the Reserve Bank (with appropriate mechanisms for regulation and industry consultation, respectively). This provides the greatest opportunity for vigorous competition between financial institutions/payment providers over the services that can be offered to end users. Recent history suggests that this is where the commercial drivers for innovation are strongest. It would nonetheless be important under such an approach to put in place systems to ensure that the central architecture continued to evolve and innovate as required.

The Payments System Board recognises that the cost of establishing a payments hub and settlement hub may be significant and that expenditure by individual financial institutions would be required in addition to this to implement real-time payments. This needs to be considered in establishing a process and timetable for achieving real-time payments. The Board is also aware that consideration will need to be given to processes for detecting and preventing fraud, money laundering and terrorist financing given that these processes have the potential to compromise the speed of payment processing.

In summary, the Payments System Board believes that the payments industry should be aiming to provide a system of real-time retail payments within the next several years. A logical extension at some point would be the capacity to associate identifiers with account numbers for easier addressing of payments. Further, the Board's view is that the system would best be provided by the establishment of real-time payment and settlement hubs. Not only would this place Australia at the leading edge of retail payments, but it is likely in itself to promote significant further proprietary innovation, using the capabilities provided by the system.

A settlement hub would need to be provided by the Reserve Bank, but the Board has an open mind about how a payments hub would be provided. Accordingly, it is seeking views on how real-time retail payments should best be delivered. However, the Board does not wish to see Australia lag significantly behind in the provision of real-time retail payments and therefore will provide the industry with a relatively short window to consider the issue. It is seeking industry views by the end of August and would like to be in a position to have a clear path forward later in 2012. An attachment to this paper sets out a possible model for a real-time retail payment system provided via a hub, along with some indicative timelines.

The Board does not see the establishment of a system for real-time payments as eliminating the need for DE payments to be settled in a more timely fashion. The DE system is of pivotal importance for business payments and it is important that its users are able to harness the economic benefits associated with more timely payments. Ongoing investment is also required to ensure its continuing reliability and utility for users.

5. Payments System Governance

Most concerns regarding the governance of the payments system centre on two main issues. First, how can public interest objectives be taken into account when industry decision-making rests in the hands of commercial entities? Second, how can the coordination problems that inevitably hamper cooperation between industry participants be overcome, while ensuring that cooperation does not discourage new entry and competition?

Over the course of the Strategic Review, the Board has come to the view that these issues cannot solely be overcome from within the industry. In order to achieve public interest outcomes, the Board believes that some external guidance is required and that this guidance would most appropriately come from the Board itself. This approach suggests a fundamental change in the Board's relationship with the industry. This would involve the Board making clear its public interest objectives at a more detailed level than has previously been the case. Additionally, this process should appropriately involve a more direct ongoing engagement between the Board and the industry in order to better establish a common understanding and purpose.

The Board proposes three related initiatives to improve payments system governance. First, the Board proposes to set high-level strategic objectives for the industry, which will help to create a shared goal and to allow the industry to allocate its resources with greater certainty. This approach can only be expected to deal with a small number of high-level issues. It will therefore be important to ensure that industry coordination and governance arrangements are adequate to both take up strategic objectives identified by the Board and to deal with the large number of other cooperative decisions that need to be addressed by the industry. The Board's second proposal is therefore to encourage the constitution of an enhanced industry coordination body that is suitable to both interact with the Payments System Board on behalf of the industry and to provide cooperative agreement on issues that would not normally be taken up by the Board. Third, the Board proposes to establish a framework for more direct interaction between this industry body and the Board itself.

These issues are dealt with below.

5.1 Setting High-level Strategic Objectives

Industry coordination arrangements appear to have difficulty achieving major shifts in strategic approach. Few of the major innovations in the Australian payments system can be put down to a collective decision by the industry. In some cases change has occurred via participants pursuing proprietary projects, which are eventually made interoperable – for instance the introduction of ATMs. Alternatively, some external impetus, including at times intervention by the Reserve Bank, has spurred change. A number of parties echoed this

point to the Bank during consultation. It appears that for a number of reasons discussed in the Issues for Consultation paper, it is difficult to garner collective support for change in a timely fashion.⁸

The Board's principal focus is on finding ways to overcome problems with coordination on high-level strategic issues. Based on the suggestions put during consultation, the Board has focused on two possible elements – a 'road map' set out by the Board on the future direction of the industry or a separate high-level decision-making or advisory body to help determine industry direction.

On the latter, some submissions to the Review suggested the formation of a council of senior-level representatives to act as custodian of an innovation road map and to provide strategic direction.⁹ The expectation would be that members would be of a sufficiently senior level so as to be able to take a broad strategic view and to commit resources as appropriate. Such a body would try to reflect the views of a broad range of stakeholders. The Board's view is that having the right mix and breadth of high-level representation on a payments body could give some greater strategic direction for the industry than is currently the case. However, even a body of this nature is likely to have difficulty overcoming the fundamental conflicts underlying industry decision-making, given that the costs and benefits of any initiative are likely to fall unevenly; a clear business case might not exist for individual players; and priorities and investment cycles are unlikely to align. Most importantly, it is not clear how the public interest would be given priority in such a forum. The inclusion of end users in decision-making could bring alternative views to the table, but would make collective decisions even more difficult. It is difficult to see how such a body could be successful without an independent party such as the Reserve Bank playing a strong role in guiding the agenda of the body.

An approach that recognises these shortfalls and places the role of the Board and consideration of the public interest at the centre is appropriate. For this reason, the Board favours the setting of high-level strategic objectives by the Board itself, based on the Board's assessment of the public interest. Many submissions suggested that the Board set a road map for the industry in order to help individual players to prioritise their activities and plan their allocation of resources over the medium term. The Board sees considerable merit in this approach, given its capacity to break through at least some of the coordination problems discussed above and provide confidence that industry direction is consistent with the public interest. This would be likely to reduce the costs of innovation and increase efficiency in the payments system.

The implementation of this type of approach needs to take account of the nature of the Payments System Board. The Board is a policy body, not a technical body. Accordingly, its role is making judgements about the public interest, including matters of safety, efficiency and competition in the payments system. The Board therefore believes that its role should normally be to set high-level objectives for the payments system, but the onus should be on the industry to determine how those objectives are met in the most efficient way. Accordingly, the Board would not be establishing a detailed road map, but indicating the final destination, which could be reached by a number of alternative paths, determined by the industry. The Board will nonetheless be prepared to provide more detailed guidance where it considers it necessary in order for strategic objectives to be achieved in a timely and appropriate manner.

8 Similar concerns have arisen overseas, for instance this has been identified as a factor in the decision by the European Commission to regulate direct entry systems – see European Commission (2012), 'Establishing Technical Requirements for Credit Transfers and Direct Debits in Euros and Amending Regulation (EC) No 924/2009', December – and in delays in implementing mobile payments in the United Kingdom – see Cave M (2012), 'Independent Review of Governance and Performance of the Payments Council 2009-11', January.

9 See, for instance, ANZ (2011), 'Strategic Review of Innovation in the Payments System: Issues for Consideration', ANZ Submission to the Reserve Bank of Australia, August. Available at <<http://www.rba.gov.au/payments-system/reforms/strategic-review-innovation/submissions/201106-strategic-review-innovation/index.html>>.

Over time it will be important for the Board to establish a clearly-articulated framework for setting strategic objectives for the payments system, including the general areas in which they are appropriate and criteria that those objectives must meet. The Board will work on this framework at coming meetings. In the meantime, the Board is of the view that the initial set of objectives for the payments system should reflect the gaps identified during this Strategic Review (see box).

Box E

Initial Strategic Objectives

The Payments System Board plans to outline strategic objectives for the payments system in order to establish a shared vision of the shape of the payments system in years to come. The strategic objectives will reflect the Board's assessment of the public interest. Based on its consultations over the course of the Strategic Review, the Board is proposing the following as the initial strategic objectives for the payments system.

- All Direct Entry payments should be settled on the day payment instructions are exchanged by the end of 2013.
- There should be the capacity for businesses and consumers to make payments in real time, with close to immediate funds availability to the recipient, by the end of 2016.
- There should be the ability to make and receive low-value payments outside normal banking hours by the end of 2016. This would include availability of the Direct Entry system and any real-time system. Ideally it would also involve the capacity for the settlement of card payment receipts during weekends and public holidays, so that receipts can be posted to merchants without generating interbank credit risk.
- Businesses and consumers should have the capacity to send more complete remittance information with payments by the end of 2016.
- A system for more easily addressing retail payments to any recipient should be available. To the extent that this is provided by a new real-time system, it should be available by the end of 2017. This does not rule out earlier availability via other solutions.

The Board is seeking initial feedback on these strategic objectives in the coming months, as outlined in 'Next Steps' at the end of this paper.

5.1.1 Setting and monitoring strategic objectives

It would not be appropriate for the Board to determine industry strategic objectives in isolation, nor would it be appropriate for the Board to take no interest in how the industry chooses to meet the strategic objectives. This suggests a need for ongoing dialogue and consultation between the Bank, the industry and other interested parties. The Board's preferred approach is to inform the setting of objectives by a consultative process that allows the Bank and the Board to hear and weigh all points of view. Consultation with an industry body would be part of this process. Once again, a timetable and broad approach would be determined before the process is next entered into. The Board anticipates that a formal process of setting objectives would occur every three years.

A second element of interaction would be engagement with the industry after strategic objectives have been proposed. The release of proposed strategic objectives by the Board could be expected to initiate fairly intensive industry discussions on the approach to meeting those objectives. In the short term, it would be

appropriate for the industry to provide some initial feedback to the Bank on those objectives, the timetable identified by the Board, and, if not the approach to meeting the objectives, then the process by which this would be determined. This might occur within the two to three months following the announcement of the objectives. Subsequently, the Board would wish to hear a well-articulated approach to meeting the objectives, along with the key milestones. Finally, during the implementation, the Board would wish to receive timely updates on progress towards those milestones. At each stage the Board might provide feedback to the industry on whether it thought the response was appropriate. The Board anticipates that this would form part of a more formal structure for engagement with the industry in the future.

As discussed below, the Board would like to see enhanced industry coordination arrangements, which would facilitate more direct engagement between the Board and the industry on these issues. However, dialogue on the initial strategic objectives will need to progress before those enhancements have been put in place. In the first instance, the Board encourages the industry to engage collectively with the Bank, through APCA or another grouping, but is also prepared for interested parties to engage with the Bank separately.

While the Board is optimistic that the approach outlined above is likely to lead to better cooperative outcomes, it acknowledges that there is a possibility that the industry will still not be able to reach agreement on a solution in every case. Given that the strategic objectives determined by the Board are matters that the Board considers to be in the public interest, it would then need to consider whether there is a case for meeting the objectives by other means. For instance, it might seek to establish infrastructure itself, or use its powers under the *Payment Systems (Regulation) Act 1998* to require that the objectives be met. In doing so, the Board would of course need to follow the processes required by the legislation, including public consultation and assessment of policies against the criteria set out in the Act.

5.2 Enhanced Industry Self-governance

In the framework envisaged by the Board, industry-level governance will be important for two reasons. As discussed above, strong engagement between the industry and the Board will be crucial to identifying and achieving strategic objectives. In addition, while identification of strategic objectives is expected to help in overcoming the challenges of both incorporating public interest considerations in industry decision-making, and achieving coordination among disparate parties, those objectives will only cover a subset of issues where industry coordination is required. There will continue to be many other issues that are important, but not of the same strategic nature, that need to be coordinated at an industry level. If anything, the range of decisions open to this approach is potentially wider than those currently decided cooperatively and some of the decisions made cooperatively could benefit from a broader perspective. The Board is therefore proposing that an enhanced industry coordination body be constituted.

Currently the main body for industry coordination is APCA. While APCA's genesis is in governing the cooperative clearing and settlement arrangements (currently cash, paper, consumer electronic, bulk electronic and high value), it has been becoming increasingly clear that needs for coordination are broader. For instance, card schemes, online payment schemes and ATM deployers are significant players in the retail payments system, but are not generally decision-makers within APCA. The separation between clearing streams and coordination needs may increase over time as independent payment schemes play a greater role and settlement potentially becomes more separated from APCA streams.

In recent years, APCA has sought greater industry-wide coordination, for instance through the Australian Payments Forum, while the card schemes are becoming more conscious of the benefits of coordinating over

security. APCA has also recently made public its proposals for new governance arrangements that would broaden membership. The Board welcomes these efforts, but considers that they should be built upon to encourage the broadest possible participation in, and coverage of, industry coordination arrangements. The Board supports constituting an industry-wide coordination body, building on APCA's arrangements, that is capable of dealing with the full range of cooperative issues that arise in the payments system, as well as being suitable for representing the industry directly in discussions with the Payments System Board (see below). The need to deal with a range of different issues suggests the body would need to operate through a number of subcommittees, similar to the existing APCA structure, but with a peak committee that has representation at a sufficiently senior level to take ownership of strategic issues and to engage directly on policy issues with the Payments System Board. These arrangements would also need to be able to take genuine account of end-users' views.

The Board proposes that the Reserve Bank work with the industry to constitute enhanced industry coordination arrangements, suitable to enable more direct engagement between the Payments System Board and the industry. Some additional views on aspects of the structure of self-governance arrangements are presented below.

Box F

Overseas Developments on Industry-level Governance

Payments system governance is also receiving a significant amount of attention in a number of overseas jurisdictions.

- The Canadian Task Force for the Payment System Review has proposed a new governance and regulatory framework for the Canadian payments system. The Task Force proposes to establish an industry self-governing organisation (SGO), supported by legislative amendments, with responsibility for industry-level governance and strategic direction. Membership of the SGO will be mandatory for all payment service providers, networks and others in the payments chain. Members will be bound to the decisions of the SGO. A public oversight body (POB), reporting to the Minister of Finance, is proposed to protect the public interest by overseeing and assessing the SGO, and exercising regulatory powers if the SGO does not function effectively.
- The European Commission (EC) has begun consultation – as part of a broader consultation on the card, internet and mobile payments markets – into governance of the industry and the Single European Payments Area (SEPA) initiative, and the efficacy of the European Payments Council (the industry body responsible for payment system coordination and decision-making). The SEPA Council, established and co-chaired by the EC and the European Central Bank to bring together the providers and users of payments, is also undertaking a review. Although both of these initiatives are still preliminary, one proposal is to give the SEPA Council the responsibility for setting strategic guidance, priorities and timeframes for the payments system.
- The UK Government is considering undertaking a consultation on payments system governance and regulation to bring the UK Payments Council (the industry body responsible for payments system strategy and governance) under public oversight. This follows a report by the Treasury Select Committee into the Payments Council and its approach to cheques, which recommended a number of changes to the Payments Council, including that it be overseen by the Financial Conduct Authority.

5.2.2 Structure, governance and powers of the industry body

A number of important questions about industry governance arose during consultation for the Review. These included:

- What are the appropriate representation and decision-making arrangements for an industry body?
- Should an industry body have greater powers to compel participants to adhere to its decisions?
- How should the need for an industry body to make cooperative decisions be balanced with competition law issues?

In relation to representation and decision-making, the Board believes that significant steps towards better cooperative outcomes, taking account of the public interest, will flow from the setting of strategic objectives and the formation of an enhanced industry body which is able to interact directly with the Board. It does not seek, at this stage, to dictate specific details of decision-making arrangements. It nonetheless suggests that the following criteria would be important in the design of governance arrangements for any enhanced industry coordination body:

- The body should have a clearly stated obligation to consider both the interests of the industry and the public interest.
- It should be representative of those that have a genuine stake in the outcomes and not dominated by any class of participants. End users' views should be represented either explicitly or through independent directors. Given the changing nature of the industry, the appropriateness of representation should be reviewed periodically.
- The coordinating body should be small enough to be effective.
- A strong role for independent directors should be provided.
- Representatives at the peak level should be sufficiently senior to promote a strategic approach.

The Board is conscious that coordination in the payments industry has often been hostage to the lowest common denominator or the slowest mover. The Board believes that setting strategic objectives will help to overcome this constraint in respect of the areas that the Board chooses to take up. The question remains whether the industry body itself should have some formal recognition of its powers so that it can compel compliance by participants that might otherwise hold up desirable reforms. There are equivalents of this overseas, for instance in Canada, where the Canadian Payments Association can compel participants under the *Canadian Payments Act 1980*. The Irish Payment Service Organisation and the Payments Association of South Africa also have formal legal recognition. In other cases, powers to compel are contractually based.

The Board believes that members should join the industry body on the understanding that they would be tied to the decisions of that body. While there would be a strong presumption that stakeholders would be members and therefore tied to the body's decisions, the Board does not see a need for the body's powers to be supported by legislation. The Payments System Board of course has powers to regulate on matters that are in the public interest, supported by the appropriate checks and balances, including accountability to the Parliament.

The Board notes the suggestion that it be able to provide greater legal certainty to cooperative decisions by the industry that are in the public interest, without regulation. Some decisions otherwise may be counter to elements of the *Competition and Consumer Act 2010* (CCA). This highlights complications of payments system competition falling under the auspices of both the Payments System Board and the Australian Competition and Consumer Commission (ACCC) – something that is recognised in the MOU between the two.

The intention of the legislators in enacting the Payment Systems (Regulation) Act was that industry-based solutions should be preferred to regulation.¹⁰ This has often resulted in the Bank encouraging the industry to voluntarily take action to address concerns in a particular area. However, some cooperative actions taken in response may nonetheless be counter to provisions of the CCA. As it stands, there are two possible means of giving an agreement of this type legal certainty. The industry can seek authorisation from the ACCC, which it will grant if it considers the agreement to provide a net public benefit. Alternatively, legal certainty can be provided where the Reserve Bank regulates; for instance, section 15A of the Payment Systems Regulation Act provides relief from Part IV of the CCA for actions taken in accordance with an Access Regime set by the Reserve Bank.¹¹

The former approach means that the industry may need to deal with multiple regulators in relation to a single issue. Regulation by the Bank can avoid the need for authorisation by the ACCC and so provide a single regulatory process, but regulation where a voluntary agreement might have been possible is counter to the intent of the Payment Systems (Regulation) Act. The Board considers that this issue would benefit from further discussion with the government.

5.3 Payments System Board Engagement with the Industry

The Board believes that fostering cooperative innovation of the type discussed in this paper will require a constructive partnership between the Payments System Board and the industry. As discussed above, the Board believes that ongoing liaison, feedback and reporting will be important in working towards implementation of the strategic objectives. However, it also believes that greater direct interaction between it and the industry is warranted in general. This is a point that has been raised by a number of parties, both in the context of the Strategic Review and elsewhere.

Should a suitable industry body be constituted, the Board proposes to engage directly with that body, both on the setting and implementation of strategic objectives and the more regular activities of the industry body. In the case of the latter, it would be appropriate for the industry body to: report on its activities; seek input from the Board on priorities; report on issues on which the industry has not been able to reach agreement; and make recommendations to the Board on areas where it considers regulatory change may be appropriate. In turn, the Board would use this as input to its own deliberations; provide feedback as appropriate; and indicate to the industry body issues that it thinks should be on the industry body's agenda.

The Board does not believe that progress on addressing the strategic objectives should wait for the process of reforming governance to be completed. There therefore needs to be continued engagement between the industry and the Bank during this interim period. The Board does not wish to dictate how this should occur; key players will need to decide whether they wish to act through APCA or by some other means. Longer term, the Board is hopeful that an enhanced industry body will have a clear mandate to engage with the Board on these issues on an ongoing basis.

¹⁰ See Payments System (Regulation) Bill 1998, Explanatory Memorandum.

¹¹ By 'specifying' and 'authorising' for the purposes of subparagraph 51(1)(a)(i) of the Competition and Consumer Act actions by a participant in a designated payment system that are in accordance with an Access Regime. Subparagraph 51(1)(a)(i) requires that anything specified and specifically authorised by an Act must be disregarded in deciding whether a person has contravened Part III of the Act.

6. Summary of Conclusions and Next Steps

The Board's proposed approach following the Strategic Review of Innovation is summarised below.

1. The Board will establish high-level strategic objectives which it believes the payments system should be able to meet by a specified time.

Every three years the Board will establish new or revised strategic objectives for the payments system, or confirm existing ones. Strategic objectives will cover the services that are provided by the payments system and potentially some of the characteristics of individual systems, for instance relating to access or interoperability. The Board will establish objectives by consulting extensively with stakeholders, both privately and through a public consultation process. As with the process that has occurred during the Strategic Review, it will take account of developments overseas. The Board will review progress towards meeting current objectives annually.

In general, the Board does not see its role as dictating the means by which the strategic objectives are met. It considers that the industry is best placed to determine how it does so in the most efficient manner. The Board, however, has an interest in ensuring that the objectives will be met to its satisfaction in a timely manner.

The Board will set objectives that it considers to be in the public interest. If it is not satisfied that they will be met otherwise, it will consider using other means, including the Reserve Bank's powers under the Payment Systems (Regulation) Act (subject to the tests and processes required by the Act), or the provision of infrastructure by the Reserve Bank itself.

To be successful, these arrangements will require considerable interaction between the Bank and the industry. The Bank is seeking an initial industry response to the strategic objectives by end August, including feedback on the timetable identified by the Board and possible approaches to meeting the objectives, in particular real-time retail payments. In future, such a dialogue should occur largely with an enhanced industry body. At this stage, given that governance arrangements have not been settled, the Board encourages the industry to engage collectively with the Bank, through APCA or another grouping, but is also prepared for interested parties to engage with the Bank separately. The Board would like to have a clear path forward identified later in 2012.

2. The first set of strategic objectives for the payments system will reflect the gaps identified by the Board during the Strategic Review.

The strategic objectives are presented in Box E on page 20. In summary the payments system should be able to provide:

- same-day settlement of all DE payments
- the ability to make real-time retail payments

- the ability to make and receive low-value payments (Direct Entry, real-time payments and crediting of card payment receipts) outside normal banking hours
- the ability to send more complete remittance information with payments
- the ability to address payments in a relatively simple way.

While these objectives need not be available through all payment systems, they should be readily available among a menu of payment services offered by different payment systems across accounts at all financial institutions. The Board recognises that the challenges in each are different and may need to proceed on different timelines. The Board's preliminary view is that same-day settlement of all direct entry payments should be available by the end of 2013. The capacity to carry additional data with payments, make and receive payments out of hours, and provide real-time payments (with real-time funds availability) should be available by end 2016. To the extent that simpler addressing of payments is provided via a new real-time system, it should be available by the end of 2017. This does not rule out earlier availability via other solutions.

The Board is prepared to consider adjusting these dates as part of its initial engagement with the industry on its strategic objectives. It is possible that these capabilities could be delivered in less time and the Board encourages the industry to strive to do so.

3. While the Board intends to let the industry determine the approach to meeting strategic objectives, it sees merit in the establishment of hub-based architecture for providing real-time payments, including a real-time settlement hub provided by the Reserve Bank.

The Board sees a system providing real-time payments as key to further innovation in the retail payments system. Such a system should be as open as possible, implying that the costs of new players joining should not rise significantly with the number of participants. It should also be capable of providing additional processing services. Finally, the Bank believes that there is a case for settling these transactions in real time so that real-time payments do not rely on credit provision. All these points suggest the adoption of a hub-based solution.

The Board recognises that there are potentially significant costs involved in a new system, risks around any commercial model, and the potential for the exercise of monopoly power. It therefore does not rule out the possibility that a commercial model is not optimal and that such a system would need to be established by the Reserve Bank.

The Bank is seeking industry feedback by end August on its preferred approach to real-time payments and the model for delivery. Next steps will depend on the outcome of that process. Should the Bank determine that the best approach is for it to provide the architecture itself, it will consult with the industry on key requirements and capabilities for a real-time payments hub solution, with a view to the possible initiation of a tender process from mid 2013. Further details on a possible approach are provided in an attachment to this paper.

4. The Board recommends a review of industry coordination, with a view to constituting an enhanced industry body with which the Board will engage more directly.

The Board proposes that the Reserve Bank convene discussions with stakeholders on constituting an enhanced industry body. The body would have broad industry coverage and would be responsible for industry coordination, as well as being the principal voice of the industry in liaison with the Reserve Bank and the Payments System Board, including in respect of the strategic objectives outlined above.

The Board considers that the governance arrangements for such a body should include the following features:

- The body should have a clearly stated obligation to consider both the interests of the industry and the public interest.
- It should be representative of those that have a genuine stake in the outcomes and not dominated by any class of participants. End users should be represented either explicitly or through independent directors.
- The body should be small enough to be effective.
- A strong role for independent directors should be provided.
- Representatives at the peak level should be sufficiently senior to promote a strategic approach.

Next Steps

Over the coming months the Bank will engage with stakeholders on the approach to constituting an enhanced industry coordination body that will engage with the Payments System Board on innovation and other matters.

The Bank is seeking input on the strategic objectives and timelines identified in this paper. In particular it is seeking input on the approach to the provision of real-time retail payments. This dialogue can begin immediately, but the Bank would like to receive views both on the strategic objectives and on the delivery of real-time payments no later than end August. As noted above, the industry is encouraged to engage collectively with the Bank, through APCA or another grouping, but the Bank is also prepared to engage with interested parties separately.

The Bank is happy to receive initial written submissions or to meet with interested parties in person. Written submissions should be addressed to:

Head of Payments Policy Department
Reserve Bank of Australia
GPO Box 3947
Sydney NSW 2001

or

pysubmissions@rba.gov.au.

The Bank will publish written submissions on its website at the request of the submitter.

A Model for Real-time Retail Payment and Settlement Hubs

As discussed in 'Summary of Conclusions and Next Steps', the Board believes that the Australian payments system ought to be in a position to deliver real-time retail payments in the coming years and it sees considerable merit in this functionality being delivered by a hub. This attachment seeks to flesh out a model for providing real-time retail payments via payment and settlement hubs and proposes a timeline.

The characteristics of a real-time retail payments hub would be as follows:

- initially providing credit transfers, with future capability for debits, future-dated payments and other payment types
- payment messages based on ISO 20022 standards
- messages capable of carrying additional remittance information
- resilient connectivity to all deposit-taking institutions
- the receiving bank to provide real-time funds availability – required by the end of the first year of operation
- the sender (payer) to have confirmation of the funds destination before committing a payment
- the sender (payer) to receive confirmation that the payment has been made into a valid recipient account
- 24 x 7 resilient operation with high levels of security
- future capability for use of customer identifiers (e.g. mobile phone number) for ease of addressing payments and to assist in account switching
- open access for financial institutions and payment service providers; that is, potentially accessible to consumer and business customers of all authorised deposit-taking institutions (ADIs) offering retail transaction banking
- settlement of each payment in central bank funds (through an enhanced 'fast' settlement service in RITS)
- support for a range of secure payment channels, including the use of mobile devices

As discussed in Section 4, there are different ways in which a hub providing real-time retail payments could be delivered. The following proposes a timeline based on the Reserve Bank, at least initially, owning and governing the system. Timelines might be longer with industry ownership if there is an initial need to establish ownership and governance arrangements:

- Reserve Bank to consult with the industry on key requirements and capabilities for a real-time payments hub solution, with conclusions available by the first quarter of 2013
- a tender process for construction of the payments hub commencing around mid 2013, with selection made by end 2013

- industry connectivity requirements available by mid 2014
- the Reserve Bank to develop the capability for RITS to process 'high speed and high volume' settlements by end 2014
- a real-time retail payments hub to be available by end 2014 for external testing by ADIs
- all ADIs (that offer transactional banking services) to have the ability to at least receive payments from the new hub (possibly via a service provider) by end 2015
- ADIs using this service to develop the capability to provide real-time funds availability following settlement by the end of 2016.