

Strategic Review of Innovation in the Payments System: Summary of Consultation

FEBRUARY 2012

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ISBN 978-0-9871488-9-6 (Online)

1. Introduction

The Reserve Bank began formal consultation for the Strategic Review of Innovation in late June 2011 with the publication of two documents – *Strategic Review of Innovation in the Payments System: Issues for Consultation* (the consultation paper) and *Strategic Review of Innovation in the Payments System: Results of the Reserve Bank of Australia's 2010 Consumer Payments Use Study*. The former provided a broad-ranging discussion of aspects of innovation in the payments system and set out 51 questions for discussion. The latter paper presented updated consumer survey data demonstrating how consumer payment patterns have evolved over the past three years.

The Bank received 35 written responses to the consultation paper and met with 20 of those making submissions. While many submissions came from parties with which the Bank frequently engages on payments matters, there were also a number of submissions from parties it deals with less often, including some associated with emerging payment channels, the superannuation industry and some payments infrastructure providers. There were a small number of submissions from users of retail payments, while CHOICE also made a submission.

This paper summarises the key themes emerging from consultation. It has been prepared as background for a round table discussion of innovation hosted by the Reserve Bank on 16 February 2012 and attended by members of the Payments System Board (PSB).¹ Perhaps the critical and most difficult themes addressed during the consultation have been industry governance and architecture. Governance is discussed in the next section, followed by cheques and cash in Section 3, gaps in the payments system in Section 4 and architecture in Section 5.

¹ Other attendees are largely those who made submissions in response to the Bank's June 2011 consultation document.

2. Payments System Governance

Governance is a topic that payments systems around the world continue to grapple with. This largely stems from the fact that open payment systems require co-operation between competing institutions. Co-operation is required to establish and operate payment systems, and also when there is a need to change or update a system in some way. However, as outlined in the consultation paper, there are many things that might prevent the necessary level of co-operation, including:

- lack of recognition by individual institutions of the benefits that might be provided to end users
- concerns that an innovation might benefit a competitor
- misalignment of investment cycles
- an incentive to hold back while others take the initial implementation risks
- lack of capacity of those participating in industry fora to commit their institution's resources
- a desire to maintain arrangements that discourage new entrants
- concerns that innovations will simply cannibalise existing revenue streams
- concerns about competition law.

There was no consensus among submissions on how to deal with these issues. The various key perspectives put were as follows:

- *Current governance arrangements are adequate.* Some of the larger industry players, including some financial institutions and the international card schemes, take this view. Nonetheless, Australian Payments Clearing Association (APCA) members generally are happy for improvements to current arrangements to be explored and are supportive of APCA's governance review. In general, support for the status quo reflects a belief that existing arrangements work sufficiently well.
- *Effective industry self-governance arrangements can never be found, therefore the Reserve Bank/PSB needs to take more of a role in directing outcomes.*
- *Representation in governance arrangements needs to be expanded.* Many held this view, with suggestions for those to be represented including: non-financial institution service providers, such as ATM deployers and cheque processors; and representatives from the superannuation, insurance and real estate industries.
- *While canvassing views broadly is to be encouraged, effective decision-making is not possible in a large group, so any decision-making body should be kept small.*
- *The 'business case' or 'business potential' for any innovation should be properly considered in the governance framework to avoid unjustified expense to participants.*

- *The power to mandate outcomes is critical.* One party noted the example of the superannuation industry, which had struggled with the design and adoption of standards on superannuation data for a decade, but has made rapid progress since the Australian Government decided to mandate standards. A number of submissions suggested that APCA should have a greater capacity to mandate outcomes. Others felt that this would be inappropriate because of the prominence of the major banks in decision-making for APCA.
- *A high-level roadmap should be determined for the payments system to give players a clear idea of industry direction over time and allow them to plan accordingly.* This was a consistent theme among many submissions. While APCA has its own Low Value Payments Roadmap, a number of submissions suggested that this role should be taken on by the Reserve Bank/PSB.
- *Decision-makers within APCA are not sufficiently senior within their own institutions to allow them to make authoritative decisions.* One financial institution suggested that a group of higher-level representatives could be established to set and implement an industry roadmap.
- *APCA voting should be based on one vote per seat, rather than voting based on clearing volumes, which places significant power in the hands of the major banks.*

Two quite substantial submissions were received in relation to governance: one from APCA and one prepared by Deloitte Access Economics on behalf of ePAL. APCA argues in favour of self-regulation in the payments industry, noting that, in the absence of an authoritative self-governance framework, participants are inclined to focus their efforts on encouraging the Reserve Bank to make a decision in their favour, rather than searching for a co-operative solution. It argues for the establishment of a single, comprehensive industry self-governing body, with clear authority to implement policies and ensure compliance. Under this model, APCA would publicly determine comprehensive payments system goals, with the PSB establishing public policy priorities and maintaining oversight. APCA anticipates that this model would require amendments to the *Payment Systems (Regulation) Act 1998*, including to provide relief from elements of the *Competition and Consumer Act 2010* (so long as industry agreements are approved by the PSB). APCA is currently undertaking a review of its own governance.

APCA's stated desire for a broad reach for a self-governing body reflects a view that the payments system is becoming increasingly 'marketised', with the role of traditional clearing systems declining and competition between payment systems and schemes increasing.² It argues that competition should drive innovation and that industry governance should concentrate on establishing a fair and effective framework for competition and minimum requirements to promote wide access, security and reliability. Minimum requirements might, for example, relate to settlement arrangements, means of physical connection and message standards.

The Deloitte/ePAL submission bears some similarity to that of APCA, proposing a mix of private and public sector governance. Under this proposal, a private entity (like APCA, but with an expanded membership) would assume responsibility for standard setting and administration of payment streams, with delegated authority from the Reserve Bank to enforce its decisions. The board of the governance body would be industry appointed, but subject to veto by the Bank, and would be accountable to the Bank. The body would have a joint function as the facilitator of commercial outcomes and overseer of public policy objectives. Membership would be open to all those with a legitimate commercial interest in the payments system. The submission acknowledges, though, that some types of decisions (such as those on interchange fees and accommodation of new entrants) may be too difficult for such a body, and may therefore require the Bank to exercise its authority. Protocols would be established to determine when decisions would be referred to the Reserve Bank.

² The establishment of ePAL and the separation of its rules from the relevant APCA clearing stream is an example of this.

2.1 Structure of Clearing Systems and Rules

The consultation paper also sought views on whether the current reach and structure of APCA rules is appropriate. APCA rules cover the clearing streams that feed into the Bank's settlement system – the Reserve Bank Information and Transfer System (RITS). These are streams for cash, paper, consumer electronic, bulk electronic and high-value payments. The consumer electronic stream has traditionally supported what has generally been regarded as two separate payment systems – the eftpos system and the ATM system. The bulk electronic system initially supported bulk files of direct credits and direct debits, but in later years has also been used for internet banking transfers. There are, of course, numerous payment systems that sit outside these clearing streams, including the international card schemes and BPAY, though the interbank obligations that arise for mutual participants are added to the amounts notified for settlement in the APCA consumer electronic and bulk electronic streams.

The consultation paper asks whether this current structure provides sufficient flexibility. In other words, do clearing streams established to service specific instruments allow sufficiently for the clearing and settlement of new products and new participants? Also, are rules that cover only the existing APCA streams sufficient, or would an alternative approach of one broad set of rules, which cover clearing and settlement for the retail payments system as a whole, provide more flexibility?

Some industry players were supportive of the current clearing and settlement arrangements in their submissions, arguing that these arrangements have not constrained innovation. A number of other players, however, argued that new products are not well supported because they have to be forced through existing clearing streams that have very specific, predefined characteristics; for instance, it is unlikely that existing clearing streams would be able to accommodate the sorts of features that are being demanded by end users (e.g. greater data transmission capability and more timely clearing). Some parties argued that a new clearing stream could be established to meet these needs, whereas some others argued the case for a simplified structure; for example, one financial institution proposed merging the bulk electronic and high-value systems as the features of the two move closer together.

Some submissions suggested that the reach of the clearing rules should be broader, to encompass, for example, the international card schemes. One of the card schemes, however, argued that its arrangements should remain separate from APCA's, pointing to the fact that it has been relatively successful at innovating under its current arrangements. One also noted that innovating under scheme arrangements is much more effective than under co-operative arrangements. As discussed above, APCA has noted the declining role of the traditional clearing streams and the greater focus on commercialisation of, and competition between, payment systems.

3. ‘Legacy’ Payment Systems

The consultation paper observed declining use of both cheques and cash.

There was a reasonable degree of accord across submissions on the implications of declining cheque use, with many arguing that this is an issue that can be handled by the industry (APCA has been undertaking its own consultation on the future of cheques). There were few submissions that argued in favour of ending cheque clearing in the short to medium term. A number of submissions argued that there are some attributes of cheques that would need to be replicated in electronic payment instruments before cheques could be removed as a payment option, with some of these attributes being particularly important for certain categories of consumers, including those less familiar with relevant technologies or poorly served by telecommunications infrastructure.

The consultation paper asked for views on whether a new pricing model for cheques should be considered, given that cheques are inexpensive for those writing them, but costly to process for both the payee and the receiving financial institution. A few participants saw a role for pricing that better reflects costs. More generally, though, submissions suggested that public relations concerns would make parties reluctant to address cheque use through pricing. Submissions did not suggest a role for the PSB in determining cheque pricing.

A large number of submissions supported investments to make cheque processing more efficient and, therefore, more viable as volumes continue to decline. In particular, there was support for capturing and exchanging cheque data, and eliminating the current practice of transporting and exchanging physical cheques between banks.

A number of parties also supported a concerted effort to reduce the use of cheques by the public sector. This could include both the issuance and acceptance of cheques. Government agencies are understood to be eager to reduce their use of cheques, but are often constrained by resistance from some groups of cheque recipients, and in some cases by a lack of good alternatives to cheques.

The consultation paper briefly discussed trends in cash use. While cash use is declining in favour of card transactions, that decline is at a very early stage relative to cheque use. Nonetheless, there is some prospect that the introduction of contactless card (and now mobile) transactions, in addition to cheaper card acceptance technology (e.g. devices that allow mobile phones to process transactions), may accelerate the decline.

The paper asked whether there are any impediments to cash replacement. Those that commented on the topic generally indicated that they saw no case for public intervention in this field. One submission argued that large denomination banknotes were being used as a store of value outside the banking system (which was costly) and argued that such notes should no longer be issued. Another submission suggested that greater efficiencies may come from eliminating smaller denomination coins. One submission suggested that it be made more explicit that the use of cash can be surcharged by merchants.

4. Potential Gaps

While much of the focus of the Strategic Review is on establishing an environment that is conducive to innovation, the consultation paper also discussed a number of specific areas that were identified as potential gaps over the next five to ten years. The responses from consultation on these issues are presented below.

4.1 Transmission of Data with Payments

It is a longstanding complaint of business that there needs to be the capacity to integrate data flows with payments, rather than having to resort to less efficient payment mechanisms, such as cheques, or having to separate data and payments and then reconcile them at a later stage. Much of the focus of this discussion has been on the Direct Entry (DE) system and its limit of 18 characters for the transmission of additional data. There was quite widespread acknowledgement among submissions that this is a genuine issue, although one submission suggested that the demand for transmitting additional data is limited. There was considerable variation in the solutions favoured by different parties. One possible solution would be to convey a reference in the existing additional data fields for the DE system, which would provide a link to the full dataset. Referencing may be used where there are concerns that the inclusion of data in the message itself might slow down payment flows or lead to system capacity constraints.

The other major class of solutions raised involves the adoption of ISO 20022 compliant messages, which provide the potential to incorporate an unlimited quantity of data. Adoption of at least one payment system based on an ISO 20022 message standard could provide the data flexibility required by business and potentially open the payments system to innovations based on the use of the associated data.

There was widespread support among submissions for the use of ISO 20022 compliant standards, but there was little support for the existing DE system to be the vehicle for this. The DE system is seen as an inexpensive and efficient mechanism for performing basic bulk-payment functions, and for many transactions this is all that is required. Moving DE to an ISO message standard would impose a large cost, not just on participants, but also on end users whose own systems are geared to the existing message types. As an alternative, some parties suggested that a new system be established to meet this need. This could, for instance, be a new clearing system established under APCA rules. APCA has already established an Australian ISO 20022 schema that could be adopted for this purpose.

One submission suggested that consideration also be given to the high-value clearing system (HVCS) migrating to an ISO 20022 compliant standard in conjunction with low-value payments. The HVCS customer message standard can currently carry 140 characters of remittance information.

4.2 Use of Standards

Comments on standards were almost solely directed towards the use of ISO 20022 compliant messages. There was widespread support for use of ISO 20022, reflecting the benefits of interoperability with offshore systems and the data transmission capacity discussed above. There was less agreement on how it should be implemented. A number of submissions argued that the cost of moving existing systems to ISO 20022 would be prohibitive, therefore it should be adopted only for new systems. Others urged mandating of the standard with a tight deadline, so that institutions would be forced to accommodate it in their systems. Some suggested a phased approach, for instance by adopting different implementation dates for new and existing systems. One submission also raised the possibility of a hub with a conversion capability to simplify migration. It was noted that there have been cases of public intervention to support the use of ISO standards in the European Union and the United States.

Only a few submissions commented on other elements of standards. Some pointed to inefficiencies that were introduced by having local device standards, but argued that these had to be weighed against the better security provided. A small number of submissions picked up on security standards, with one noting the Bank's comments on the results of its 2010 Consumer Payments Use Study which suggested that fraud may be constraining greater use of online payments. This submission argued that it is important to work co-operatively to establish security standards.

4.3 The Timeliness of Payments

The consultation paper referred to two elements of the timeliness of payments – funds availability to recipients (for instance, for emergency payments to individuals or for cash flow purposes for small businesses) and the authorisation of a payment to a merchant (so that, in an online environment, goods and services can be shipped, booked or downloaded immediately). Most submissions focused on the former, presenting a spectrum of views, including some that suggested the demand for this feature is not high enough to justify significant investment in a solution.

There are three elements that may have a bearing on when funds are available to the customer. First, timely exchange of payment messages is a necessary, but not sufficient, condition for more timely availability of funds. Currently, eftpos messages are exchanged in real time and DE messages are exchanged five times during the day (although the largest share of payments is in the final two exchanges of the day). Second, the timing of interbank settlement may have an influence. Interbank settlement for retail systems currently occurs on the morning after the message exchange. It is nonetheless possible for institutions to post funds before settlement, although in doing so they are accepting a risk that the paying institution will not settle, or at least not settle on time. This discretion over when funds are posted is the third element of the timing of availability of funds, often influenced by the institution's systems capabilities. Several submissions highlighted the fact that the capacity and willingness to post funds quickly is becoming more widespread. By contrast, some submissions suggested that the only way to achieve timely posting is to impose a mandate. Others suggested that this would be very costly for some institutions and that accelerated posting should be driven by competitive forces. Several submissions suggested that any mandating of posting standards should be left to the industry.

An important question for the review is whether there is a case for a retail system that would allow transfers closer to real time; that is, requiring more frequent (preferably real-time) message exchanges than the DE system provides. One submission argued that an 'immediate payment' channel is necessary to support new

payment types and channels, such as mobile and online. Another suggested that 'credit eftpos' be adopted for this purpose; that is, the normal flow of payments in the eftpos system would be reversed so that payments could be made to cardholders. The submission suggested that internet banking sites could allow customers to enter the card number of the intended recipient of a payment. Given that eftpos messages are transmitted in real time, transactions could be posted immediately to customer accounts. This would allow the recipient to access the funds almost immediately. A further question is whether real-time or near real-time settlement of retail transactions should play a role. This is not strictly necessary for the faster availability of funds, but would reduce settlement risk and create a more level playing field for participants that are unable to extend credit.

Another issue raised in the consultation paper was the availability of the payments system during evenings, weekends and public holidays. The closure of the banking system means that a DE payment made on a Friday night might not be available until Tuesday or Wednesday, depending on the institution, and even longer over long weekends. Merchants have indicated that the same is true for settlement of eftpos receipts, even though a hold is immediately placed on the cardholder's funds. A number of financial institutions expressed concern about the cost of supporting weekend exchanges, including, some said, the need to keep treasury operations and RITS open to support liquidity needs and to prevent the build-up of exposures.

4.4 Mobile, Person-to-person and Electronic Purse Systems

The principal aim of the consultation paper in relation to these payment types was to ascertain whether there are any impediments to their development and therefore whether there is any need for public intervention.

In relation to **mobile payments**, some submissions highlighted the fact that technology is changing quickly and this is causing the payments industry to approach the area with caution. This also argues against public intervention. Nonetheless, there was general agreement that mobile payments in Australia are likely to be based predominantly on mobile internet or near-field communication (NFC – contactless) technology, rather than SMS-based payments. Another theme in submissions was the complexity of co-ordinating different players in the mobile payments sphere. Financial institutions, telecommunications companies, software providers, handset manufacturers and potentially other service providers might be involved and there are different views among these players about the best model for mobile payments, including, for instance, the way that NFC payments should be delivered.

The consultation document asks whether there are areas where standards are lacking in relation to mobile payments. Some submissions identified customer authentication standards and security protocols as issues. Others pointed to the fact that there are already a number of international groups working on various mobile standards. Some submissions noted that mobile phones offer some security advantages over payment cards, such as the ability to require a password to access payment applications and the capability to disable payment functionality remotely if a phone is lost.

Some parties argued that the absence of a real-time retail payments framework in Australia inhibits the development of innovative mobile payment solutions.

Those submissions that commented on **person-to-person** (P2P) payments generally suggested that there is no case for public intervention, although two submissions noted that such systems are hindered by the absence of a system for easily addressing payments. One financial institution commented that the low price of existing services meant that it was difficult to find a business case to pursue a P2P solution. Nonetheless, some P2P mobile payment options have begun to be offered of late, with addressing based on mobile phone

numbers or email addresses, but these are significantly less convenient where users are not customers of the same financial institution (or of a closed system).

Those that commented on **electronic purse** systems typically noted that widely accepted electronic purse systems in other countries have tended to grow from transport ticketing. It was noted, though, that this has not occurred with the Oyster ticketing system in the United Kingdom and, in fact, the ticketing authority in London is now focusing on encouraging the use of standard contactless debit and credit cards on the transport system.

4.5 Other Potential Gaps and Issues

There were many other stand-alone issues raised in submissions that are worthy of consideration, including the following.

- One submission highlighted the cost and opacity of remittances (i.e. from foreign workers to family members in their home countries). Remittance systems have been the subject of innovation in some other countries, though often with public intervention. The Australian Government has been working to reduce the cost of remittances, including through joint development of the sendmoneypacific.org website and a package to reduce the cost of remittances to Commonwealth developing countries.
- A small number of submissions highlighted the emergence of 'virtual currencies', such as Facebook credits, and urged consideration of how these might interact with traditional payment systems.
- CHOICE urged that any new solutions pursued be consistent with account portability and suggested that customers be given the ability to opt out of new payments technology (such as contactless functionality on cards).
- One submission suggested adding functionality to the DE system that would allow it to return a message to the payer, confirming that the payment had been received by the intended party. This might provide users with greater confidence in making DE payments, for instance when using internet banking for non-time-critical payments.

5. Payments System Architecture

Along with governance, the critical decisions arising from this review are likely to relate to architecture, for a number of reasons. First, the Bank has observed that centralised systems appear to be better able to innovate than bilateral systems. This might in part reflect necessary differences in governance structure, but centralised systems also provide easier access for new entrants and can potentially provide additional services that may transform the nature of the payments and services that can be provided. Second, the efficiency gains from centralisation increase as the size of the network increases. Therefore, to the extent that a high level of participation is an objective of any new systems, there should be a presumption in favour of centralised architecture. Third, architecture is relevant in the context of real-time or near real-time *settlement* of retail payments, which may require the establishment of a new system interfacing with RITS. Finally, discussion of architecture is intrinsically linked with governance discussions. For instance, investment in architecture that offers a public benefit might not present a compelling business case for a sufficient number of financial institutions, particularly where it may cannibalise existing products. In such circumstances, the investment is unlikely to proceed under a range of governance arrangements. This potentially raises public intervention as a response.

The consultation paper asked for views on the benefits, costs and possible roles of hub architecture and also the benefits and costs of real-time or near real-time settlement architecture. Because it was not specific about the type and function of a hub that might be considered in the Australian context, comments on the paper were quite disparate and not necessarily focused on the same concepts. In general, submissions acknowledged the benefits of hubs and many supported their use for new systems, although one party argued that the standardisation involved in hub arrangements is inflexible and is therefore not best practice. A number of players also pointed to the risk entailed in creating a single point of failure.

A number of submissions focused on physical connections and argued that the Community of Interest Network (COIN) already provides sufficient centralisation. Others focused more on the cost of moving existing bilateral arrangements to a hub, which they argued would be difficult to justify commercially. Smaller players, on the other hand, tended to emphasise the difficulty they saw in accessing existing bilateral arrangements.

APCA has presented a useful framework for considering centralised versus decentralised payment arrangements. This comprises three levels of interaction between participants, namely:

- physical – the means by which messages are carried from one institution to another
- logical – the rules/protocols that govern how those messages are exchanged
- business – the business/contractual arrangements that govern the relationships between participants.

Any of these can be established bilaterally, or be centralised and hence be ‘hub-like’.

Steps have been taken towards greater centralisation in Australia in recent times. As several submissions pointed out, the COIN is effectively a virtual hub, allowing participants to communicate with all other participants by making only one physical connection. The establishment of ePAL and initiatives of APCA have also led to some greater standardisation or centralisation in relation to logical and business arrangements. Nonetheless, new entrants to a truly centralised system need largely to deal only with the central body to establish these arrangements, whereas bilateral negotiations of some form continue to be required in many cases.

The case for considering alternative architecture arrangements rests on those arrangements either improving efficiency or addressing one or more specific problems identified in respect of a payments system. In the Bank's view, there are three main types of function that hubs can perform that are relevant to the Strategic Review:

- *Simplify 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.
- *Enable 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.
- *Facilitate 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.

In considering these possible roles, account needs to be taken of different types of retail payments, in particular whether payments are transmitted as bulk files or individual real-time messages.

The recently created Low Value Clearing Service (LVCS) is relevant to the case of bulk files. This is effectively a form of hub to facilitate the exchange of payment clearing files, allowing institutions to continue to exchange files where they have adopted different communication networks. While the current function of the LVCS is to achieve interoperability between networks, it could be adapted to perform other roles in relation to bulk files, given that all institutions exchanging files must be capable of sending files to, and receiving files from, the LVCS. For instance, a new entrant could establish a physical and logical connection to all other participants simply by connecting to the LVCS. The LVCS could also be used to provide add-on services for bulk files, for instance, breaking bulk files apart for distribution to individual receiving institutions, or potentially more advanced functions. The LVCS is not, however, designed to provide services for individual real-time messages. Performing similar functions for these payments would require separate infrastructure.

The consultation document asked for views on ownership/governance arrangements for any new centralised infrastructure. One bank argued that private ownership would provide for commercially based decisions, but risked monopoly pricing, while a public utility might tend to be inefficient. It suggested a public-private model, which could take advantage of the benefits of each. Other submissions suggested that if a hub were created to process real-time individual transactions, it should initially be developed/managed by the Bank, but allowed to run as a commercial or semi-commercial venture at a later stage. One submission argued strongly that it would be inefficient for payments infrastructure to be in public hands. ✖