RESERVE BANK OF AUSTRALIA

Regulation and Innovation in the Australian Payments System

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Modernisation of Retail Payment Methods in Chile
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By way of explanation, my department of the Reserve Bank focuses solely on the oversight of the payments system and my particular focus is retail payment systems – not the high value systems that central banks tend to spend most of their time thinking about. An event like this is a good opportunity to step back and think about what are the things we do that are likely to be of most interest to payments professionals in another country with a different institutional setting. I cannot claim an in-depth knowledge of the Chilean payments system, so what I plan to do is reflect on some of Australia's experiences with retail payments with the hope that some of those general messages strike a chord with the sorts of things that are on the agenda here.

I will focus on two main things. Firstly, the Reserve Bank is well known for taking some pretty bold steps in the regulation of card payment systems – something that has been watched with interest in many countries. So I will talk about our regulatory framework and the approach we have taken to retail payments. While the specific examples might not quite fit into your own framework here, I think the sorts of tools we have tried to use will be of interest.

Secondly – more specifically related to innovation – I will talk about some exciting current developments that are being achieved without regulation, but which are likely to see a transformation of retail payments and we hope underpin rapid innovation in the years to come.

Finally, I will try to draw together some lessons from the past decade of regulation of retail payments.

Retail Payments Regulation

So let me start by explaining how we came to be seen as something of a path-breaker in card payments regulation.

Back in 1998 there was a major shake-up in financial regulation in Australia, one element of which was an overhaul of our payments system regulation. That involved giving the central bank explicit responsibility under its Act for efficiency and competition in the payments system – as well as the more usual central bank stability mandate. This came with some new powers to regulate payment systems and a large boost in the profile of payments issues within the Reserve Bank through the creation of a second Reserve Bank board, which was to concentrate solely on payments system issues – known as the Payments System Board. So we have one Board for monetary policy and another board for payments system issues.

I do not want to spend too much time on legislation, but the key new powers we gained through legislation were the power to designate a system – and that means simply to bring that system under our control – and then to impose a standard or an access regime – that is, either a set of rules about how that system must operate or a set of rules that ensures new players are not unnecessarily kept out. These powers are quite strong; often change can be brought about more readily under our legislation than under competition law.

Nonetheless, while we have strong powers, an important feature of our system to keep in mind is that payment systems are not subject to specific regulation until we decide that there is a problem that needs to be fixed, that cannot be fixed voluntarily. We would then designate and consult on setting a standard or an access regime. And while we are known around the world for making some pretty strong regulatory interventions, in reality we have designated only a few systems and in those systems we have imposed relatively few rules. This was explicitly the intent of the legislation – that the preference should be for the industry to set its own rules, and regulation would only be used as a last resort.

So, after 1998 we had new powers, a new board, and an obligation in legislation to promote competition and efficiency – what would we do with all that?

Well, when you think about efficiency in the whole of the payments system, it is the low-value, retail transactions that count rather than large-value payments. We have around 1 800 transactions a day through our high value system, but around 13 million through our card systems; a small inefficiency is magnified enormously by the sheer transaction volume.

Now I understand that your card systems look a bit different from ours – particularly in that you have a single acquirer providing card acceptance services on all cards.

Our mix of card systems looks a bit like this:

We have two international four party schemes – MasterCard and Visa – which operate both credit and debit card systems. There is also a domestic debit card system, known as EFTPOS, which has the majority of the debit card market, but the international schemes are catching up very quickly.

In these three systems there are about 14 acquirers – these are the banks that provide merchants with the capacity to accept cards these systems. There are many issuers. Issuers and acquirers are authorised by our prudential regulator, but they need not be traditional banks.

Then we have three party schemes American Express and Diners Club. Who by and large are both issuer and acquirer for their own cards without the banks being involved – although there are some quirks there.

Our regulation has been focused on the interplay between these schemes.

Given our focus on competition and efficiency, the way we go about regulating retail systems is quite different from many other payments system overseers. Many tend to focus on systems one at a time; for instance, they might focus on assessing individual systems against international standards. That can be a good approach for safety and stability purposes, but when your focus is competition and efficiency, looking at systems in isolation can lead you to miss things.

When you step back and look at the payments system as a whole you see that, what one system does can have a large impact on how people use the payments system and therefore on other systems. So rather than looking at individual systems in isolation, we began looking at allocative efficiency. In other words, we are interested in whether people are able to choose the payment method they use in a way that properly balances the true costs and benefits of that method. Or, are there distortions that lead to people making inefficient choices?

To put that into a real-life example, why is it that when I went into a department store to buy, say, a shirt, I would be paid to use my credit card with reward points and an interest-free period, yet I would often be charged a fee to use my debit card? That is curious enough, but when we calculated the cost of producing those two payments – the one I was being encouraged to use cost financial institutions 59 cents for an average-sized transaction and the one I was being discouraged from using cost 22 cents. That did not sound like an efficient payments system – clearly there were some distortions.

With all that as background, we embarked on a series of world-first reforms that were intended to:

- bring relative prices for payments more into line with relative costs
- remove a number of restrictions on merchants that were creating distortions.

Specifically we:

- required card schemes to remove no-surcharge rules
- increased transparency
- capped interchange fees
- removed ‘honour all cards’ rules
- opened up access to the systems.

Today I will mostly focus on the first three.

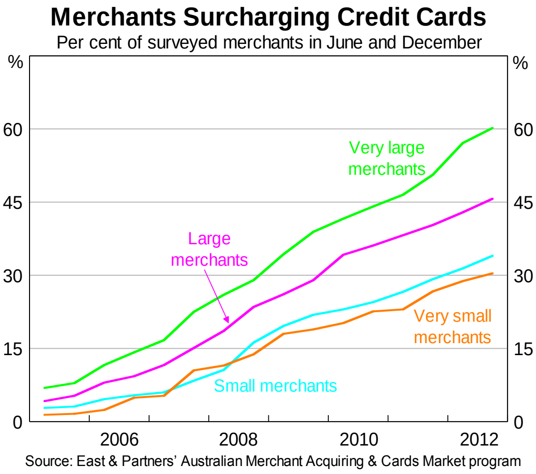
Removal of No Surcharge Rules

You may be familiar with the fact that many card schemes have rules which say that a merchant cannot charge more for their card than for other means of payment. Before we regulated in this area, a $100 payment might have cost a merchant on average about $1.40 on a MasterCard or Visa card and about 3 cents on an EFTPOS domestic debit card. But merchants could not charge a different amount for credit card to signal that difference, so they built the cost into the overall price of the goods or services being sold. That cost was thus paid by everyone, regardless of whether they used a credit card, domestic debit or cash.

On the other hand, if merchants could surcharge for the credit card, some people would choose to use lower-cost payment methods and the overall price of the goods or services would be lower. People who do not use credit would not be subsidising wealthier people's reward points. Because the resource costs of producing an EFTPOS transaction are lower than the cost of a credit card transaction, the cost of the payments system overall is lowered. Finally, there will be competitive pressure to make the cost of credit cards lower to merchants so that surcharges will be lower.

That is a pretty compelling set of benefits and in fact if you could achieve surcharging across all merchants that perfectly reflected the cost differentials of different payment methods, the need for a lot of other regulation would be removed.

Graph 1



We forced card schemes to allow surcharging in 2003. This has been our experience. It was slow to start with, but over time it has become more accepted. Survey results suggest that nearly 40 per cent of merchants now surcharge, with larger merchants more willing to surcharge than smaller merchants.

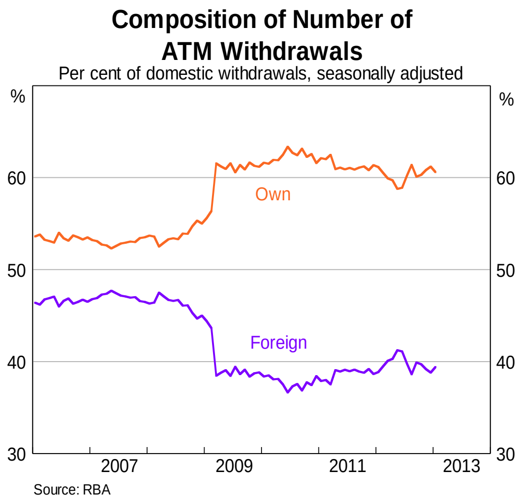
Is it effective? Our own survey results show that if faced with a one per cent surcharge about 50 per cent of people say they would switch to another payment method.

Transparency

A second focus has been **transparency**. Transparency is the type of reform we love because it is all about letting the decision makers out there in the community, whether they are businesses or consumers, make payment choices that are better informed. That means that the regulator does not have to second guess what the efficient outcome is. A great example of this is something we did on ATMs. Under our old system, whenever a customer was using another bank's ATM, their own bank would charge them $2. Most people were not conscious of the fee because they would only be reminded of it much later when it appeared on their monthly or quarterly bank statement – if they chose to read it.

We changed the underlying fee arrangements so that the fee was charged by the ATM ***owner*** and was displayed clearly on the screen before the transaction was completed. So the cardholder was still paying $2, but it was now much more obvious to them. This was the result.

Graph 2



Transactions at ‘foreign’ ATMs (i.e. ATMs operated by a different provider than the cardholder’s bank) fell significantly, just because the fee was more transparent. That saved people in the order of $120 million a year.

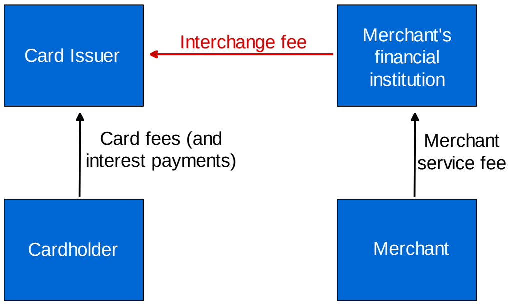
We have done some similar things with credit cards. We publish average merchant service fees (or merchant discount rates) for different schemes. That means that a merchant can look at those averages, then go to their bank and ask why they are paying more. We also require the card schemes to publish data on their interchange fees, which helps merchants to better understand the components of the fees they are paying.

Interchange Fees

That then brings us to **interchange fees**. Interchange fees have really dominated the policy debate on card payments in Australia and have been getting increasing focus around the world. My view is that they can potentially play a positive role in a developing payment system, but they can be very disruptive in mature payment systems.

Figure 1:

Fee Flows in a Credit Card Transaction



Since I understand that there are no interchange fees in your local card systems, I will provide a quick explanation. Forgive me if I am going over familiar territory. Basically, while both the merchant and the cardholder pay fees of some sort to their respective banks, there is also a separate interchange fee paid between the merchant's bank and the issuing bank. These fees tend not to be very visible to end-users, but they matter a lot because they change the prices faced by the different parties involved and can have a significant impact on their behaviour.

The argument for interchange fees is that for a card system to be successful it needs on one side customers to hold the cards and be willing to use them, and on the other side merchants who will accept the cards. An interchange fee can help you to provide an incentive to the party that is hardest to get into the system.

A good example is our EFTPOS system in Australia. When that first began in the 1980s, most consumers already had a card attached to their bank account that they used for making ATM withdrawals. So what you needed in order to have an efficient electronic point-of-sale payment system was for merchants to have terminals and be willing to accept the cards for point-of-sale payments. How do you do that? Well you pay an interchange fee from the cardholder's bank to the merchant's bank, so that merchants can be given an incentive to accept cards – for instance by offering them a very low merchant fee. As a result, we ended up with perhaps the only card system in the world where interchange fees were paid from the cardholder's bank to the merchant's bank.

So that is the 'balancing' argument – you use interchange fees to better balance the costs and benefits to the different players when you are trying to get a system up to a sustainable size. Of course if you get the balance wrong – for instance if cardholders are generously rewarded but the system is too expensive for merchants – it will never take off.

I want to stress again that that is interchange fees in a payment system that is developing. But are interchange fees necessary in mature systems where cards are already widely held by consumers and are widely accepted by merchants? We would argue not only that they are not necessary, but they are quite disruptive.

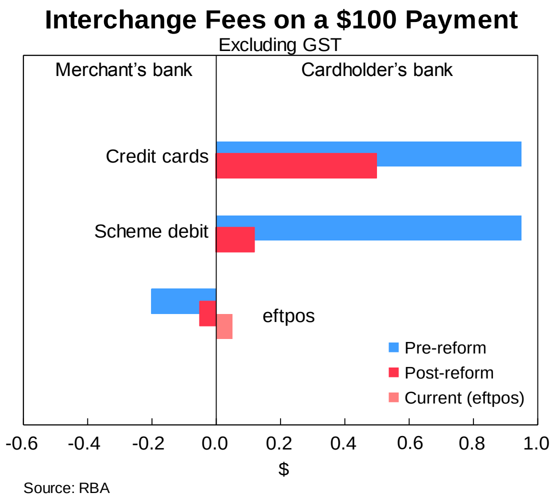
Before our reforms, about one dollar was being paid to the issuing bank for a $100 transaction on a credit card and part of that $1 was be paid to cardholders as reward points. This made the cards attractive to both the issuers and to consumers. But what then happens if one card scheme wants more customers to use its card rather than another card? The obvious solution is to increase the interchange fee further so that there is even more for the issuer and the cardholder. The cost is passed on to the merchant who feels he has to accept the card because all his competitors do.

So that makes this a very unusual market. Competition between mature card systems drives interchange fees up, not down. Worse, if there is one system that is not able to compete using interchange fees – which has historically been the case with our EFTPOS system – then you may have very strong incentives driving card use purely on the basis of differences in interchange fees. That is the example of the incentives the cardholder is given in the department store.

This is where our regulation came in. Surcharging is one tool to deal with this problem, but we also opted for direct regulation of interchange fees, which was enormously controversial at the time – in particular because it set a precedent for other countries.

This is what we did:

Graph 3



This shows interchange fees on a $100 transaction for credit, scheme debit and EFTPOS. The blue bars are before regulation and red bars are after regulation. As I mentioned, our EFTPOS system was probably unique in the world that it had interchange fees that flowed to the merchant's bank.

The key thing to note here is that by imposing caps on interchange fees we have brought them closer together. The differential in interchange fees between a credit and an EFTPOS transaction has come down from about $1.15 to 45 cents. The difference between a scheme debit and an EFTPOS transaction has fallen from about $1.15 to around 7 cents.

It is worth noting here that we have only capped interchange fees for the four-party schemes, but those fees do not exist for the three-party schemes because there are no banks involved. So for American Express and Diners Club, we have forced the removal of no surcharge rules, but there is no direct fee regulation.

So, does any of this matter?

Clearly the card schemes thought it mattered because they fought it in the courts – unsuccessfully. One scheme claimed at the time that the reduction in interchange fees would lead to a ‘death spiral’ as cardholders and merchants abandoned the scheme:

> A self-reinforcing cycle could be set in motion that could eventually lead to the whole open system unravelling: interchange fees set too low, leading to issuers charging higher fees to cardholders, leading to diminished cardholders network, leading to fewer merchants acquired, leading to the need to further lowering of the interchange fee, and so on. This could be characterized as a “death spiral” process.
>
> (MasterCard Submission to Reserve Bank of Australia, June 2001)

Let us look at what the effects of these reforms have been, starting with card holders. Remember that this is about improving price signals given that cardholders were being subsidised to use credit cards.

Firstly annual fees for credit cards went up – from about \$60 to \$85 for standard cards over the first few years and from just under \$100 to \$140 for gold cards. At the same time reward points fell – on a typical card a person used to have to spend \$12 000 to earn a \$100 voucher; now they have to spend nearly \$19 000.

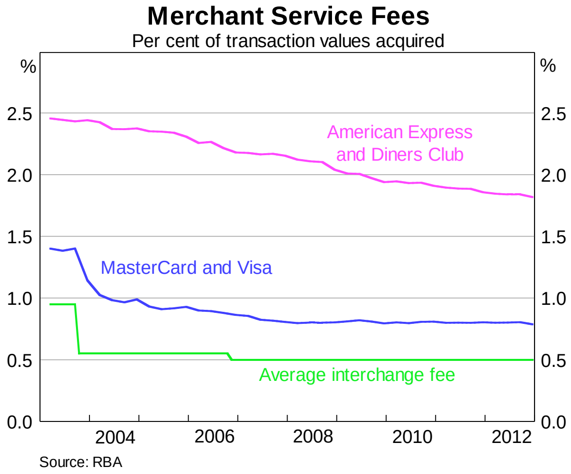
Table 1: Value of Credit Card Rewards

Year	Average spending required for $100 voucher	Benefit to cardholder as a proportion of spending (%)
2003	$12 400	0.81
2004	$14 400	0.69
2005	$15 100	0.66
2006	$16 000	0.63
2007	$16 300	0.61
2008	$16 700	0.60
2009	$17 000	0.59
2010	$18 300	0.55
2011	$18 400	0.54
2012	$18 700	0.54

As we have already seen, in some cases consumers are also receiving better price signals via merchant surcharging.

So what has it all meant for merchant costs?

Graph 4



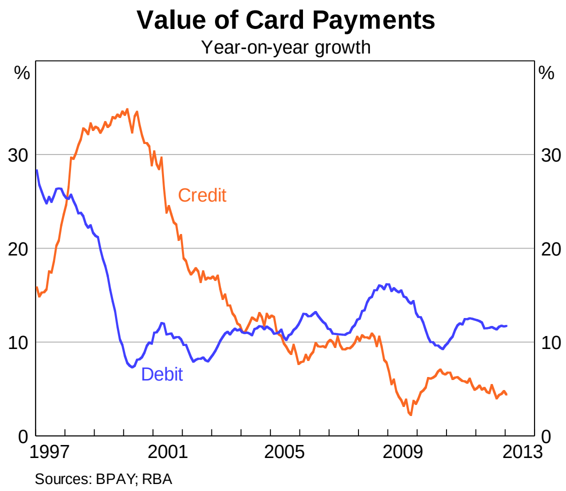
So here we have merchant service fees or merchant discount rates for MasterCard and Visa combined and for American Express and Diners Club combined. Looking at MasterCard and Visa first, the bottom line shows the 50 basis point fall in the interchange fee as a result of our regulation. In the first instance that is a benefit to the merchant's bank (or acquirer); competition between acquirers has meant that that fall has flowed fully through to merchant discount rates. In the first few years we estimated there to be a benefit in the order of $1 billion per year for merchants. And of course you would expect that to by and large be passed on to all consumers.

I do not have in-depth knowledge of the Chilean payments system or the typical level of merchant discount rates, but I would encourage you to compare these MasterCard and Visa rates where we have competing acquirers with the merchant discounts that are faced by merchants here. Bear in mind of course that the acquirers are paying away the interchange fee, so their margin is actually about a third of a per cent.

The other interesting thing in this graph is the merchant discount rates for the American Express and Diners Club systems. Remember there was no direct price regulation on American Express and Diners Club, yet their merchant service fees have fallen by about the same amount as MasterCard and Visa. Those fees have been under pressure firstly because American Express suddenly looked a lot more expensive to merchants relative to MasterCard and Visa. Secondly, as the higher cost schemes, American Express and Diners Club are often surcharged at a higher level than MasterCard and Visa, so they feel the effects of surcharging more.

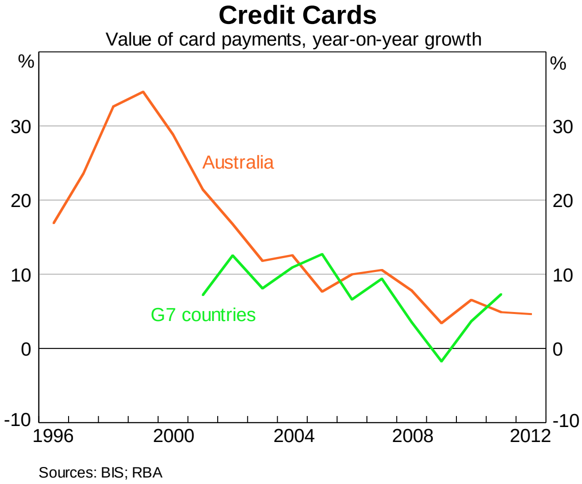
Has there been a 'death spiral'?

Graph 5



Here is the growth rate of credit card transactions in Australia. You can see that they were growing at about 35 per cent a year prior to our intervention. They have clearly slowed from that level. They ticked along at a nice steady rate of about 10% per year after that – just a bit slower than debit and then took a turn down in growth rates after that. Of course that is, to a large extent, the effect of the global financial crisis, where people have really shied away from debt generally. You can see that pattern across the G7.

Graph 6



So, credit card transactions have continued to grow, but there appears to have been some rebalancing between debit and credit.

So how would I summarise all that? We have:

- improved price signals to consumers
- reduced costs to merchants which will have generated a reduction in prices to consumers relative to what they otherwise would have been
- reduced the resource cost of the payments system overall
- removed the need for people who do not use expensive payment methods to subsidise the reward points of those that do
- given merchants tools to help them negotiate with issuers and schemes – for instance by threatening to surcharge or cease acceptance of a particular card product.

This has been an interesting exercise for others to observe. A number of other jurisdictions now limit interchange fees and many are allowing surcharging.

Innovation

I have probably talked for too long already about regulation. But given the innovation theme of this seminar I would like to touch briefly on some of the things we have been doing more recently, which have not involved explicit regulation, but have been much more about the Bank playing a leadership role.

While the Bank has intervened strongly in a small number of very specific areas, in general it is actually quite hands-off with payments systems. As I mentioned before, payments systems are generally not subject to regulation until there is a specific problem that cannot be addressed otherwise. This has very much been our approach to innovation in the payments system in the past. Surely the people who deal with customers, who know the operations of payments systems backwards and who have a profit motive are the best people to drive innovation.

But over the years we have observed something striking. As we know, in order to pass payments between financial institutions there needs to be cooperation on the systems and standards that facilitate those payments. So competitors need to cooperate to be able to deliver an effective and efficient payments system.

What we have observed over a number of years is that there has been quite a rapid rate of innovation – for instance in relation to internet or mobile banking and payments, chip and now contactless cards, right down to the ability to put a picture of your dog on your credit card. But this flurry of innovation has occurred largely in areas where banks do not need to cooperate with one another. So it has largely been customer-facing innovation, rather than innovation in the core infrastructure that supports much of the payments system. That core infrastructure has been very slow-moving and in reality is holding back other innovation.

As an example several of the banks have been promoting new 'apps' that allow a person to use their mobile phone to send a payment from their bank account to the bank account of the person sitting next to them. That second person would immediately be able to use those funds. But there was one problem: both people had to bank with the same bank. If they banked with different banks it was a more complicated process and the funds would not be received until the next day. That was because the payment would then rely on the cooperative interbank clearing and settlement system which is not capable of supporting a real-time service.

There is actually quite a list of potential improvements to the core infrastructure of the payments system that people have been talking about for the last decade. But the industry on its own has never been able to agree to deliver them. There are a number of reasons why this might be the case. For instance, it could reflect:

- different business mixes that make the business case more attractive to some banks than others;
- different investment cycles which inevitably mean that it is the wrong time for some banks to make the change;
- different internal system configurations that make the task easier for some than others; or
- simply different visions about where the industry should be headed.

Then add to these reasons the general difficulty of committee-based decision making and you have an environment where cooperative innovation is very difficult.

After years of observing these problems, we decided to undertake what we called the Strategic Review of Innovation in the Payments System. As part of that process we singled out the list of gaps that people had been talking about in the payments system for years and where we felt we risked falling behind.

Those things were:

i. real-time retail payments, with faster clearing, faster settlement and faster availability of funds
ii. the availability of retail payments systems (including availability of funds) out of normal business hours
iii. the ability to send additional information with a payment – compared with the current restriction of 18 characters
iv. easier addressing of payments – using an identifier rather than the 15-digit format of bank and account number.

Further, we said that we had now become convinced that a hands-off approach to innovation was clearly not working, so we were going to do a couple of things.

First, in an effort to help the industry coordination process, the Payments System Board was going to set out some strategic objectives for the payments system every few years. This we felt would provide enough direction for the industry to be able to coalesce around a solution – but would still allow the industry control over the solution. We described it not as a roadmap, but as setting a beacon on the hill with the industry itself deciding how to get there. The first set of strategic objectives was addressing the gaps on screen here.

The second thing we wanted to do was establish an industry coordination body that was better able to grapple with some of these very strategic issues and commit to cooperative solutions. There is an existing association that decides on clearing system rules, but it is not suited to more strategic projects. In the new body we are in part seeking much more senior representatives of institutions than we see in existing industry groups – people who have a broader strategic perspective and are able to bring their entire institution along with their decisions, including importantly the capacity to commit funds. The new body or council would be able to engage in a direct dialogue with the Payments System Board on these big picture industry issues.

These policies were announced in June. How is it going? Well, since its release the industry has agreed to move our main batch payment system to same-day settlement by the end of this year.

More importantly, the key players have agreed to build a completely new payments system which would provide real-time retail payments, carry a significant amount of remittance information and include an addressing solution so people could send payments to a phone number, email address or some other identifier. What is more, the system will go a step further than some similar systems in that transactions will also be settled individually in real time across the central bank's books. On top of that, it is a system that will be designed to be open and access-friendly to encourage future innovation.

There will also be a new Payments Council set up during the course of this year which we hope will play an ongoing role in generating these sorts of innovations.

So this has entailed a more hands-on approach to innovation than in the past, in recognition of the longstanding evidence that cooperative innovation is very difficult to achieve in the payments system. So far, the results have been extremely promising. The philosophy here is that we cannot predict exactly where innovation will take us, so our role is to put in place the structures in the payments system that should support innovation in whichever form it takes.

What Lessons would I take away from the Past Decade?

First, never underestimate the power of interchange fees as a motivator in the payments system. It may be possible to make a case for them in some developing systems, but in a mature system they may act against meaningful competition and against efficiency. They do not seem to be essential for mature systems. We have had different systems operating successfully in Australia with interchange fees running in different directions, while other systems around the world operate perfectly well without these fees. And as we have seen, the reduction in fees in Australia has not led to the predicted 'death spiral'. From the Reserve Bank's perspective, the option of reducing interchange fees further remains on the table.

Second, surcharging is in theory the perfect tool for encouraging effective competition in the payments system. While it is not popular with consumers, it changes behaviour and has helped people to understand a bit more about relative payment costs. Even where a surcharge is not applied it can be a very effective bargaining tool for a merchant.

Third, while I have not talked much about access to payments systems, this is something we grapple with in some form almost every day. There is always a seemingly plausible reason why new players should be kept out of a payment system or some aspect of a payment system. These arguments usually either do not stand up to close scrutiny, or can be addressed in another way. The burden of proof should be on those wanting to prevent access, not on those seeking it.

Fourth, while regulators often tend to look at new payment innovations, such as contactless cards and digital wallets, through a safety and security lens, we believe that it is equally important to consider the implications these developments might have for competition in payment systems. Innovators should be able to reap benefits from innovation, but we need to be careful that innovation is not used in a way that restricts competition. We have already had some vigorous discussions on some of these issues in Australia and it seems likely that that is only going to continue in the period ahead.

Finally, cooperative innovation among competitors is genuinely difficult. Regulators should never try to pick winners, but it may be necessary for them to play a leadership role to help overcome the headwinds that prevent cooperation. Much as with competition, their role should be to remove barriers to innovation.