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## Data, technology and competition: The uncertain future for banking and regulation.

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### Introduction

Banking it is claimed is facing a period of disruption and uncertainty. Technological advances, it is argued will transform the industry and sweep away old institutions.

Alas, I am here to deliver the 'damp squib'. Tonight it is my sad duty to say that the banking revolution is not around the corner. While there will be technological change that will improve services and benefit customers, this will be evolutionary not revolutionary.

In this talk I want to consider two of the potential drivers of technological disruption – Open Banking and the New Payments Platform.

### Open banking

Australia's Open Banking regime has elements in common with both the UK's Open Banking regime and the new European Payments System Directive (PSD2). The key element of each is that banks are required to release information about a client's accounts to either other financial institutions or to the client themselves, at the request of the client.

So how will the data freed up by open banking be used? Judging by overseas experience, an early application will be a mobile dashboard for consumers. If a customer has multiple financial products spread over different institutions a service provider will be able to bring this data together. The consumer will have a one-stop-app for their finances and budgeting.

Another early application is likely to be improved comparison tools. Consumers will have a better idea of what financial products they can access and at what price in real time.

However, will open banking actually make a difference to retail banking competition?

### Will Open Banking enhance retail banking competition?

There has been a lot of work in economics on information and competition. Most of this work is not specific to banking. But it does suggest that open banking can have a real pro-competitive impact.

Why?

The basic idea is that customer specific information drives bespoke products and personalised pricing. If only one bank has a consumer's information, then they can offer a bespoke product. But they will do so at a high price.

How will rivals respond? As they lack the information for the bespoke product, the best they can do is offer a generic product and try to win on price. But that is not a great strategy. Indeed, in some situations, the best that rivals can do is give up. The information advantage is so important that each producer simply focusses on its existing customer base and there is little if any business stealing.

This is not a great outcome for consumers.

Now, introduce open banking reforms so that consumers can ensure that all potential providers have their relevant information.

With information symmetry, producers can compete on both the bespoke product and the price. Competition moves into over-drive and consumers end up significantly better off.

There are a number of caveats to this result.

First, in some markets, such as insurance markets and lending markets that are subject to adverse selection, better information can make some customers better off but makes others worse off.

For example, if driver data is automatically collected by car companies but then passed on to insurers, good drivers will generally find they get offered better insurance at a lower price. But drivers revealed as poor risks by the data may find that their price of insurance rises.

Second, knowing that data can be shared will alter the incentives of banks to collect the data in the first place. For open banking, the focus is on account and transaction data. Financial institutions need this data to provide the relevant products so there is little risk that the data will not be collected. Importantly, open banking does not apply to value added data, where a bank has worked with customer data creating larger data sets that, for example, allow it to better manage its whole-of-business risk.

As the broader consumer data right spreads, the clear distinction between customer data and value-added data must be maintained to avoid creating perverse incentives.

Of course, there is a trade-off. By limiting the scope of shared data, the competition benefits from reform may also be limited.

Third, in banking, regulation is significant and necessary for prudential stability. But this regulation may impede the type of bespoke products that open banking is designed to incentivise. To get the full benefits from open banking, regulations must be flexible enough to allow financial institutions to be innovative in their product offerings.

### Open banking and SME Lending.

As an example, let's consider the interaction of open banking and lending to small and medium sized businesses.

It has been argued that Open Banking may have a big impact for small business. By enabling small businesses to provide relevant data currently held by one financial institution to other financial institutions the hope is that competition will be put on steroids. Rather than facing one informed lender and many uninformed competitors, the SME will face a range of lenders with the information they need to evaluate risk and provide finance.

Navaretti, *et. al.* think these potential benefits are overstated. In their view SME lending is “[r]elationship banking ... built on human interactions between a loan officer and a prospective borrower” (2017). They argue that the hard data that may be provided under Open Banking will be a poor substitute for an on-going relationship between the bank and the SME customer.

Jaksic and Marinc (2015, p.12) similarly consider that “[t]raditional banks might retain a competitive advantage in relationship banking; that is, when dealing with soft and proprietary information about their clients”.

This difference of opinion relates to our second caveat – depending on the type of data covered by open banking, it may change the incentives for banks when they collect data.

At present, the SME’s bank has a competitive advantage through all the information it holds, including ‘hard’ customer-provided data and transaction data and ‘soft’ data associated with the ongoing relationship between the bank and the customer. Open banking, by focussing on the hard data, will not completely remove the information asymmetry between potential lenders. But it will help alternative lenders to better evaluate the SME and make competitive loan offers. It is better for the customer to be able to easily provide alternative lenders with access to at least the hard data, rather than no data.

It may be argued that this distinction between ‘hard’ and ‘soft’ data is over-rated; that most Australian banks gave up relational banking long ago. Maybe or maybe not. Others are better placed than I am to judge this. However, even if this claim is true today, it is unlikely to hold true in the future. With open banking, the ‘soft’ information provided by ongoing customer relationships rather than ‘hard’ transferable data, is likely to be an incumbent bank’s point of difference. A bank that downgrades the value of relational information may find itself out-competed by those that value and invest in this soft data. In other words, open banking may see banks refocus on the sort of soft data that is excluded from the open banking regime, in order to gain a competitive advantage.

The bottom line is that open banking will benefit SME’s compared to the status quo.

What about our third caveat, on system flexibility.

The extra information available to competitor banks through both open banking and other IT advances, will help banks better evaluate the risk associated with specific SME loans. Because information will be shared across banks, this should make it easier for SME’s to get loans that are appropriately priced to their level of risk. However, banks may be constrained in their ability to increase the level of nuanced SME lending if their capital costs cannot change to reflect these differences in risk.

As the Productivity Commission noted in our draft report on competition in the Australian financial system (2018, p.18) “[a] single risk weight (of 100%) applies to all SME lending not secured by a residence, with no delineation allowed for the size of borrowing, the form of borrowing (term loan, line of credit or overdraft) or the risk profile of the SME borrowing the funds. In contrast, Basel proposed risk weights for SME lending vary from 75% for SME retail lending up to €1 million, to 150% for lending for land acquisition, development and constructions”.

Having an open banking system with the potential to provide information-based bespoke loan products to SMEs will have a diminished value if these banks face one-size fits all prudential regulation.

So for open banking to bring its potential benefits to SME's there needs to be a nuancing of prudential regulation.

What about the final caveat.

Will open banking make all SME's better off?

No!

Small business is often risky. New small businesses may have little information – hard or soft – that can be evaluated by lenders. Sometimes a well operating business will hit hard times. In some cases it can recover and information will help lenders support this recovery. In other cases, the SME will be terminal and the business should be wound up – despite potential protests from the owners. Our first caveat holds true. Open banking is not a panacea for poor business. It will enhance, not undermine, SME lending. But there will still be disappointed SMEs.

### Interaction with overseas standards.

So, in my opinion, Open Banking will bring real benefits to customers. But it will not be a big bang.

And there is a longer term question about whether individual country data rules, like our open banking rules, can survive over the longer term.

In Australia, open banking is the first application of the new Consumer Data Right. This right will “give consumers the right to safely access certain data about them held by businesses. They will also be able to direct this information be transferred to accredited, trusted third parties of their choice” (The Treasury, 2018, p.1). Applications of this right in energy, telecommunications and other sectors are expected in the future.

Similarly, in the EU, there is the open banking reforms, PSD2, and a broader General Data Protection Regulation or GDPR – the equivalent of our consumer data right. Unlike Australia, however, these reforms have developed in parallel and it is not clear that they are consistent (Vezzoso, 2018).

It is clear, however, that there are inconsistencies between the Australian approach and the EU. For example, following the recommendations of both the Productivity Commission's inquiry into *Data availability and use* (2017) and the *Review into Open Banking* by Scott Farrell (2017), the Australian approach to Open Banking does not give consumers a right to delete data on them that is held by a bank. In contrast, the GDPR has an explicit 'right to erasure' or 'right to be forgotten' in certain situations.

As different countries roll out their data regimes, these inconsistencies will grow. It is likely that regimes that are adopted by larger trading areas, such as the EU, and that are more conservative, will dominate. Businesses will not want to support multiple compliance systems. And they will not want to be isolated from large trading blocs.

In other areas where international standards are required for consistent operations of businesses in multiple jurisdictions, such as telecommunications, international standards

bodies are established. At present, this seems a dim hope for data. The result may be a patch work of inconsistent international standards with the Australian open banking standards being largely usurped by more conservative overseas rules, such as the GDPR.

## Payments and the cashless society

The second potential driver of technological disruption that I want to briefly discuss is the new payments platform (NPP).

The NPP is a significant piece of infrastructure that allows close-to real time transfers between accounts held by different individuals at different financial institutions.

But it is not the first such platform.

The NPP follows – and has learnt from – the UK’s Faster Payments Service (launched in 2008), Sweden’s Swish mobile payments system (started 2012) and Singapore’s G3 system (started 2014).

So will the NPP and similar innovations overseas revolutionise payments, potentially leading to the demise of both cash and the traditional card businesses like Visa and MasterCard?

### Will this lead to a cashless society?

Superficially, the potential for disruption to cash and traditional card payments seems strong.

For example, Ant Financial, with its Alipay system, in China, has developed the world’s largest mobile payments system.<sup>1</sup> In 2003 it launched as an online payments system. In 2011 it went off-line, for general consumer payments. These payments can be initiated in two ways.

The first involves the payer generating a one-off QR code that is scanned by the merchant. The other is where the payer scans a QR code with the merchant’s banking details and uses this to transfer funds to the merchant.

Alipay can be linked to traditional debit and credit cards but can also use stored value. Its stored value capabilities are threatening traditional banks. Users have the option of having their funds in an Alipay e-wallet invested in an at-call money market fund and there are approximately 260m users of this service. In terms of transaction numbers, Alipay is larger than the main Chinese credit card system, UnionPay.

So is China the poster child for payment system disruption?

Certainly not for Australia.

Ant Financial expanded in a society that had been significantly underbanked and where interest rate controls made traditional bank accounts unattractive. Its rise is more market penetration than disruption.

So perhaps we need to look to a developed country for the payments revolution.

In Sweden, the success of the Swish technology has coincided with a significant reduction in the use of cash. Swish was created by a consortium of seven Swedish banks in cooperation with the central bank of Sweden and operates via a simple phone-based application. It

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<sup>1</sup> The discussion on Alipay and Ant Financial is largely drawn from Lu (2018).

enables real-time transfers in Swedish Krona between Swedish banks. There are no fees for individuals, and there are low per transaction fees for businesses (approximately 2SEK or AUD0.30 with no surcharging). It uses a PayID system – so that transfers can be made to a person just by knowing that person’s phone number.

So Swish sounds a lot like the NPP. And the success of Swish has led to claims that Sweden is moving to be a ‘cashless’ society:

“Sweden is one of the most cash-less societies in the world, and many shops, restaurants and even bank branches refuse to accept cash payments. In just over 10 years Sweden has halved its cash in circulation to 50 billion Swedish crowns (\$6.14 billion) from 112 billion” (Reuters, 2018).

However, while the statistics show increasing use of Swish, it is largely for person-to-person transactions not person-to-business. So while Swish and debit cards are both driving down the use of cash, they are impacting different transactions:

“Card payments using debit cards retain their position as favourite among Swedish households. This year, 80 per cent state that they paid by debit card for their most recent purchase, 13 per cent that they used cash and 7 per cent that they used a credit card. Purchases regarding sums under SEK 100 also occur increasingly with debit card. Mobile payments such as Swish are still used to a very limited extent for purchases in an actual shop” (Sveriges Riksbank, 2018, p.4).

In other words, traditional card payments are driving down the use of cash. Swish payments are a small part of the story.

The experience with the FPS in the UK has been less impressive than Swish, but reflects similar factors with growth in both debit cards and FPS payments occurring at the expense of cash.

When commenting on the UK experience, and its applicability to the US, Greene *et. al.* (2015, p.28) note that “Overall, from a consumer perspective, it appears that consumers in retail settings in the United Kingdom and the United States have good options for fast payments. Debit and credit transactions appear immediately, and cash is often an option. Merchants may see this differently, as their payment may be delayed. But consumers tend to be the driving decision-makers in retail settings, and they have little reason to adopt something new, unless incentives change, for example, if merchants were to choose to offer discounts. However, person-to-person transactions are different”.

Based on overseas experience, the NPP is unlikely to drive us rapidly towards a cashless society. It currently does not offer the speed at checkout to be a viable alternative to card payments, particularly contactless payments. To be a viable card substitute, NPP payments would have to be facilitated through the scanning of a relevant code (such as a merchant QR code) or through a NFC reader for a mobile phone. Merchants would also need to be able to quickly verify receipt of funds.

However, even with these innovations, real-time transfers may not be attractive to customers compared to card payments. Real time transfers are generally irreversible and banks are not liable if the customer enters incorrect information. As such, they offer consumers less security than card payments (Worthington, 2018).

So the conclusion is simple – while cash may be dying, cards are thriving – and will continue to do so for the medium term.

## Lessons for payments

So what lessons can we take from overseas experience for the NPP and for payments in Australia?

First, if we want the cost and efficiency of payments to be improved here, we need to look at our regulation of traditional debit and credit cards.

In Australia, card payments make up over 50% of the number of consumer payments and this share is growing. Cash makes up most of the remainder.<sup>2</sup> The total value of debit and credit card transactions are approximately the same, although the number of debit card transactions is about 50% more than the number of credit card transactions.<sup>3</sup> The use of cards for low value, often contactless, transactions is rapidly growing. For example, in 2016, cards accounted for 32% of transactions under \$10, up from 4% in 2007. Cards account for the majority of transactions in all bands above \$10. As Doyle, *et. al.* (2016, p.5) note, “the median value of card payments at the point of sale continued to decline, from \$40 in 2007 to \$28 in 2016”.

However, the regulation of card payments, both here and overseas, needs improving.

Australia has been a leader in this area, and should continue to be so. However, since 2003, the Payments System Board has played a game of regulatory whack-a-mole with the card companies and banks. Regulation has been put in place on interchange fees and surcharging. However, this regulation has led to circumvention and further regulation. As a simple example, three party schemes such as American Express were able to avoid the original interchange fee regulation. They do not have an interchange fee. This resulted in banks issuing American Express companion cards that could avoid the regulations. The result – American Express rapidly increased its market share in card payments and the RBA had to modify the regulations to close this loop hole.

While the new regulations came into effect in July last year, it is already clear that banks are considering ways to circumvent them. For example, in January this year, Westpac announced that invited customers could apply for a new Westpac branded American Express card. These cards would however be issued by American Express, avoiding the revised card restrictions.

Rod Maddock and I suggested an alternative regulatory approach in a recent (2017) ACFS working paper – a ‘customer pays’ approach. Regardless, there needs to be a review of the current approach to card regulations to ensure that the regulations are sustainable.

## Can the NPP facilitate payments innovation?

The second lesson is that if the new payments platform is to be a vehicle for disruption in payments, it needs to be accessible by innovators, not simply the existing banks. While Swish has been the most successful new payments platform, it is still dominated by the traditional banks and its services reflect this dominance. The FPS in the UK, together with

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<sup>2</sup> Doyle, *et. al.* (2016, table 1) and Payment system board annual report - 2017, Graph A1.

<sup>3</sup> Doyle, *et. al.* (2016, table 1), Reserve Bank of Australia monthly payments data and Payment system board annual report - 2017, Graph 4.

the UK open banking regime, seems to be attracting more payments innovation, but this has required changes to other parts of the financial system, such as the prudential rules for dedicated payments providers and their access to exchange settlement accounts at the Bank of England. It is too early to tell if these innovations will be true disruptors. However, if we want innovation and disruption to have a chance in Australia then we need a clear access regime for the NPP and we may need changes to other regulations.

### If you want a cashless society look to the underbanked

Third, it should not be a surprise that disruptions to cash payments and the development of alternatives to cash and traditional card-based payments are occurring in developing countries. The banking systems in these countries are often poor and many people have little access to banking services. In such a situation, alternatives can thrive. These countries, such as China, Kenya and India, will leapfrog the technology of developed countries like Australia.

That said, the new payment instruments developed in these countries will raise the same old prudential issues. For example, while Alipay's e-wallet is a popular deposit account in China, it also is largely outside the prudential net.

"However, as an increasing number of depositors move their money from bank accounts to fintech e-wallets ... they will no longer be entitled to the official protection over their money. Most depositors do not realize this potential risk ..." (Lu, 2018, p.42).

In the longer term, Alipay may become China's 'too big to fail'.<sup>4</sup>

So, where does this leave Australia. The NPP will change payments. It needs to be open for innovators. But any change is likely to be evolutionary not revolutionary. The payments revolutions will come from developing countries – at least until something goes wrong.

### Competition and the role of Fintechs

My comments so far will be a disappointment to the boosters of fintech. In the two areas I have considered I don't see a revolution coming anytime soon.

Both open banking and the NPP are important reforms. They will benefit consumers and the Australian economy. But, in my opinion, they are unlikely to be disruptive reforms.

More broadly, financial innovation, both in Australia and globally, is nothing new. It goes back to at least the period of deregulation in the 1980s. Some of these innovations have been significant. For example:

- The advent of securitised mortgage lending in the 1990s in Australia, which significantly increased competition in the home loan market; and
- The growth of index funds and exchange traded funds, which have significantly increased the ability of small investors to access equity investments at low cost.

There has also been significant 'internal' technological innovations in the banking system, including ATMs and mobile banking; improved card functionality (PIN then paywave); and

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<sup>4</sup> The People's Bank of China has recently tightened prudential rules on third-party payment providers, requiring them to keep all customer funds in non-interest bearing reserves from 2019. However, this will not apply to Alipay's e-wallet. See Wildau (2018).

the internal improvement of banks' IT systems to move away from separated 'product by product' systems.

These types of innovations will undoubtedly continue.

However, external disruptive technological innovations have largely been absent in the past and I don't believe they are just around the corner now.

Not everyone agrees with this view. For example, Gomber, Kauffman, Parker and Weber (2017, p.5) note the past failures of outside disruptive technology in banking but argue that this time will be different.

"The fundamental difference today is the new abundance of data, the increasing maturity of the data infrastructures and integrated systems that have been deployed to process it, as well as the emergence of pattern recognition, data mining, machine learning (ML) and other digital-sensing tools in the financial services environment that can utilize it".

However, most fintechs will aim to co-operate with the existing financial institutions, not disrupt them. They will aim to be taken over and have their technology incorporated into the product offerings of incumbents. There may be exceptions at the margin, for example in payments. But do not look to the fintech sector to disrupt Australia's current banking oligopoly.

So for banking, the uncertainty will continue. But much of the uncertainty will revolve around regulation and product evolution not external disruption.

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