

Australian Payments Network Limited

CEO Dr Leila Fourie

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Check against delivery

Firstly, and most importantly, the payments industry is changing rapidly. Payment options are becoming more integrated, intuitive and frictionless. To meet the industry, regulatory and technology demands of this new world, Australian Payments Network (AusPayNet), formerly APCA, has begun repositioning to respond to the changes in the payments industry. Online merchants are a key part of this new world. A helpful way to consider the changes currently impacting the payments industry is to think in terms of three related drivers:

- Technology push
- Consumer pull
- Mediating regulation

I will approach this issue by looking at the trends, and then thinking about the underlying drivers

Technology Push Elements

I would like to start with a quote from Roy Amara, an American scientist and futurist. He said:

“We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run” (e.g. Introduction of motorcars – no one formed a committee about what to do about pollution, accidents. When we invented cigarettes, no one talked about cancer)

I think that this is an interesting way of approaching the impact of technology on society, and I think it's useful to keep in mind as I progress through our talk.

Internet Penetration in Australia and the Rise of Smartphones

Internet penetration in Australia is around 85%, compared with 92% in the United Kingdom and 88% in the United States. Interestingly, Australia is ahead of the UK and US when it comes to older Australians (Australians aged over 65).¹ In 2015, 71% of older Australians reported going online, compared to 58% of older Americans and 56% of Britons.² Underpinning these technology push elements is the enormous growth in smartphones. Figures released by Deloitte indicate that 84% of

¹ LiveStats Data Aggregation, Internet Users by Country <http://www.internetlivestats.com/internet-users-by-country/>

² Australian Communications and Media Authority, Digital Lives of Older Australians, <http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Digital-lives-of-older-Australians>

Australians currently own a smartphone, up from 76% in 2014.³ Again, in this we compare favourably to other similar nations. A Pew survey in 2015 indicated that 77% of Australians owned a smartphone, compared to 72% of Americans and 68% amongst the British.⁴ We are expecting a final push towards smartphone usage this year, when GSM networks are turned off, forcing a migration to 3G and 4G.⁵ We are also seeing greater integration of biometric authentication in smartphones. You would all likely be aware of the fingerprint authentication in recent iPhone models. Recent announcements from Samsung indicate that their new model, the Galaxy S8, will include facial recognition technology, to complement the iris scanner and fingerprint technology.

The Fading Visibility of Payments in Offline and Online Environments

This discussion of facial recognition technology leads neatly into the next point I would like to make, which is around the fading visibility of payments in offline and online environments. You can now pay using your mobile phone, or smart-watch in the same manner that you would pay using a contactless card. As we have seen in the new offerings from Apple and Samsung, strong biometric authentication is coming to underpin mobile payments. This provides both security, and convenience, as the process of proving your identity is simplified.

Wearable technology is becoming more and more ubiquitous. Contactless payment technology has been incorporated into sunglasses and bracelets. Offline retailers are also beginning to experiment with even more radical options. Google began, and recently ended, development on a 'Hands Free' app that would allow customers to pay for items simply by saying "I'll pay with Google" to a cashier. While Google ultimately ended development in early 2017, this gives you an idea of how this technology is evolving. Amazon is also experimenting in this space. Two notable projects include Alexa, and Amazon Go. Google has just announced this week that they plan to introduce a product to rival Alexa, called Google Home.

Amazon Go is a retail store that just lets shoppers grab whichever items they need and leave. Computer vision and sensors detect which items they are taking out of the store, and the customer's account is charged after they leave. Alexa effectively acts as a personal assistant. A user can control connected devices, or order goods, simply by talking to Alexa.

The consistent theme across these developments is that payments are becoming more integrated, and less visible. Payments are gradually fading from the customer experience. Where once you had to go online, search for a product, find your credit card, input your credit card details, and perform any additional authentication, you can now just swipe your sunglasses, or ask your Alexa device to order for you.

³ Deloitte, Mobile Consumer Survey 2016, <http://landing.deloitte.com.au/rs/761-IBL-328/images/tmt-mobile-consumer-2016-final-report-101116.pdf>

⁴ Pew Research Center, *Smartphone Ownership and Internet Usage Continues to Climb in Emerging Economies*, <http://www.pewglobal.org/2016/02/22/smartphone-ownership-and-internet-usage-continues-to-climb-in-emerging-economies/>

⁵ Deloitte Mobile Consumer Survey 2016

Big Data and Analytics

The growing integration of internet and payments has also increased the amount of data that consumers produce. The growing integration of payments and internet into household appliances (the 'Internet of Things') will likely accelerate this trend. Online retailers are blessed with rich data sources on consumer payments and habits that allow them to align their products with customer needs. This allows them much greater levels of insight into what works from a customer perspective – what customers want, and how to retract and retain a clientele. This also provides a neat segue into the next topic I would like to address, consumer pull elements.

Consumer Pull Elements

Decline of Legacy Payment Mechanisms and Rise of Electronic Payments

The use of cash in Australia is in precipitous decline, and cheques have almost completely disappeared. These trends were highlighted in data released by the Reserve Bank of Australia in early March. The RBA⁶ data showed that the pace of ATM decline had doubled in the past two years, even as contactless payments had surged.⁷

Cheques and cash are what we describe as legacy payment methods, and they are generally in decline:

- Latest RBA figures show that since 2006, cheque use has dropped by 75%
- In 2016, the number of ATM withdrawals dropped by 7.5%; direct entry (debits and credits) grew by 8.6%; and card transactions were up by 12.3%

This decline has been evident for some time. Media reports on the ongoing decline of cash have now become an annual ritual.

Changing Consumer Priorities

The changes in consumer demands for new payment methods is driven by changing expectations around how products and services will be delivered. Consumers have new priorities.

Four of the major trends include: Hyperconnectedness, personalisation, hyperconvenience and stronger product experiences:

- Hyperconnectedness. Digital devices are everywhere. Consumers are coming to expect that devices will be interoperable, that they will be able to talk to each other, and that they will do this in the background.
- Personalisation. Big data is driving a revolution in analytics that provide new tools for merchants to align their products with consumer demands.

⁶ Reserve Bank of Australia, *Payments Data*, <http://www.rba.gov.au/payments-and-infrastructure/resources/statistics/>)

⁷ Sydney Morning Herald, \$110bn: Australia's Contactless Boom, <http://www.smh.com.au/business/retail/110bn-australias-contactless-boom-20160805-gqmg7j.html>

- Stronger product experiences. Aligned with the demand for greater personalisation, consumers are becoming more experiential, and demanding stronger product interactions.
- Hyperconvenience. Finally, consumers now expect that products will be available 24/7, and with short lead times.

These changes in consumer behaviour are no doubt affecting your work, and they are also affecting payments.

The Rise of Seamless Payment Options

So, if people are no longer paying with cash, what are they doing? As you will know, they are moving online, and they are moving to contactless options. The NAB Online Retail Index shows an 82% growth in online shopping between 2011 and 2015. This trend is cross-demographic. The proportion of Australians over 65 accessing the internet grew from 65% in June 2011 to 79% in 2015.⁸

Offline, the use of contactless cards has surged. While we do not have precise public figures, we can identify a clear trend. MWE Consulting estimates that contactless payments now account for about 45 per cent of the value of purchases made with a personal credit card, or around \$110bn. Consumers are attracted by the ease of contactless payments.

In terms of face-to-face payments, the number is even higher. While we do not know precisely, it is likely around 75% of face-to-face payments are made using a contactless card. By 2020, only 1/5th of transactions online will require you to input your credit card. We are also seeing new options for payments. Mobile banking apps now routinely contain options for contactless payments via mobile phones. Third party mobile wallet developers such as Apple and Google have also launched their own offerings.

Australian Trends in Global Context

Australia has a strong story to tell. We are one of the international leaders in contactless payments. Older Australians are more comfortable with online shopping than their counterparts in Britain and the United States.⁹

It is also useful to highlight the global nature of these trends. The decline of cash is consistent across different jurisdictions. However, the extent of decline varies substantially. In some Scandinavian countries, cash has almost completely disappeared from the payments landscape. By contrast, Germany is still heavily cash-reliant.

In many ways, payments innovation is being led by countries outside the OECD.

The Chinese BATs – Baidu, Alibaba and Tencent – have developed mobile payment solutions. Payments are now highly integrated with social media platforms Weibo and Weixin. In India, a rapid

⁸ Australian Communications and Media Authority (ACMA) *Digital Lives of Older Australians*
<http://www.acma.gov.au/titnetnet/heACMA/engage-blogs/engage-blogs/Research-snapshots/Digital-lives-of-older-Australians>

⁹ Australian Communications and Media Authority (ACMA) *Digital Lives of Older Australians*

demonetisation program implemented in late 2016 by the national government has spurred the growth of digital payment solutions.¹⁰

Mediating Regulation

Cash Alternatives

Cash has been ubiquitous in national economies for centuries, so much so that we barely stop to think about it. But it has substantial downsides – it could be used enable the black economy, tax avoidance and criminal behaviour. However, governments have historically lacked a viable alternative. But governments are now starting to examine whether new payment methods can bring more visibility and traceability to large areas of their economies.

The most dramatic development recently is India's demonetisation. In late 2016, almost overnight, the Indian government unexpectedly yanked the two most popular currency notes out of circulation. Putting aside the macroeconomic impacts, we can see that this had a positive impact on the drive to digital payment methods.

The providers of e-wallet and other digital payments systems used demonetisation as a customer acquisition tool. For example, e-wallet Paytm saw three times the number of new users, and there was a 167% increase in Oxigen's wallet users.¹¹

It is highly unlikely that Australia will adopt an approach that extreme. However, several government inquiries are looking at the implications of a less-cash society. For example, a cross-departmental taskforce (being led by Treasury) is looking at the black economy. Media reports suggest that the role of cash in the Australian black economy is under consideration. What are the implications for the online retail industry? They show the likely digitisation of payments and the steady increase in online activity.

Government Support for FinTech

Australian governments are increasingly looking at ways to support the FinTech industry. Research by the Victorian Government suggests that the Australian FinTech sector will grow to \$AUD4.2bn by 2020.¹² The global FinTech industry continues to grow, with \$24.7bn invested in 2016.¹³ Interestingly, much of this growth is occurring outside of the OECD, with four of the five largest global FinTech firms located in China.¹⁴

¹⁰ Forbes, *India's decision on rupee notes has made local fintech very happy*
<https://www.forbes.com/sites/suparnagoswami/2016/11/10/indias-decision-on-rupee-notes-has-made-local-fintech-very-happy/#333f0f452e01>

¹¹ Forbes, *A Cashless Future is the Real Goal of India's Demonetization Move*,
<https://www.forbes.com/sites/wadeshepard/2016/12/14/inside-indias-cashless-revolution/>

¹² Frost & Sullivan (2016) *FinTech in Australia – Trends, Forecasts and Analysis 2015-2020*

¹³ KPMG (2016) *The Pulse of FinTech Q4 2016*

¹⁴ KPMG (2016) *FinTech Top 100 2016*

Chinese giant Alipay has flagged a substantial global expansion program and may target Australia for market penetration.¹⁵ Australian governments are seeking to capitalise on this opportunity by adopting FinTech-friendly regulatory settings.¹⁶ The Australian Government has released a policy, *Backing Australian FinTech*, and is looking actively at ways in which government can offer regulatory support to FinTechs.

Open Data Mandates

AusPayNet has been closely following consideration of a mandated standard for open data access both in Australia and overseas. In broad terms, such a mandate would require financial institutions to provide access to certain types of data it held on a customer to certain accredited third parties, on the request of the customer. This would allow FinTechs to build apps that leverage financial data across institutions. In Australia, such a standard is currently under investigation by the Productivity Commission, as well as the House of Representatives Banking Inquiry. It is likely that the Australian Government will formalise a position in the coming months.

The United Kingdom, through the Competition and Market Authority (a British equivalent to Australia's ACCC) has released a report that mandates open data and imposes a deadline on financial institutions to comply.

What are the implications for the payments industry, and for online merchants? This reinforces the growing trend towards digital solutions. It will give FinTechs the ability to embed integrated payments options more deeply into their user interfaces. If we want an idea of where FinTech may take payments, and how it might affect your industry, the Chinese BATs may offer a useful case study. Chinese BATs offer high levels of payment integration into their social media apps.

Challenges and Response: A Vision Statement for the Future

So far, I have given some more general notes on the changes that are occurring in the payments industry, and how these changes are being driven by technological changes, consumer pull and supported by government regulation.

I'd like to end with some analysis of the challenges and opportunities in this space. In particular, I'd like to look at the changing nature of fraud in the payments space, before pulling the discussion up a bit, and ending with a bit of a vision statement about where payments may be moving in future.

Changing Nature of Fraud in the Payments Space

Firstly, there are challenges as well to the new sphere. As payments move online, and as we see the growth of e-commerce, we see new forms of fraud emerging. I don't want to dwell on this area, because I think that the overall message from the payments sphere to online retailers is positive. One area includes the rise of fraud.¹⁷ In the 12 months to June 2016, Australians spent \$703bn on their

¹⁵ Wall Street Journal (1 Nov 2016), *Alipay Mobilizes for World-Wide Expansion*

¹⁶ Commonwealth Government (2016), *Backing Australian FinTech*

¹⁷ Australian Payments Clearing Association, *APCA releases interim payment frauds data*

<http://www.apca.com.au/docs/default-source/2016-Media-Releases/apca-releases-interim-payments-fraud-data.pdf>

cards, of which \$521m was fraudulent. That is equivalent to 0.07%. However, Card Not Present (or Online) fraud is rising. In the same period, Online fraud rose from \$323m to \$402m. It now accounts for 77% of all fraud on Australian cards. There are indications that this trend is continuing in the period after that data.

However, there is positive news. Firstly, consumers are quite robust with respect to online fraud. Research undertaken for AusPayNet indicated that, although 42% of consumers immediately ceased transacting online, these behaviours typically did not last longer than 72 hours.¹⁸

Secondly, AusPayNet is leading industry work on solutions to reduce the incidence of online fraud. Merchants can seek advice on best practice protections from their existing providers – acquiring banks, gateway providers and website developers:

- Detection. Identifying and stopping fraudulent transactions before payment is processed or goods are dispatched.
- Authentication. The safest way to verify cards and ensure that you're dealing with a genuine cardholder.
- Data Security. Protection of customer data through a solution that replaces card numbers with a token.

But the move to digital is also giving us more tools to fight online fraud. Multi-factor authentication (the online equivalent to 'PIN at POS') offers a secure mechanism to underpin online payments, and upcoming improvements will deliver frictionless consumer experiences to address online retailers' current cart abandonment concerns.

Yet some cart abandonment 'by design' due to robust Detection, Authentication and Security is preferable to after purchase recovery of monies and or goods. If the customer is an online fraudster, then you would want them to abandon at that point. Work on biometrics and digital identity also offer scope to reduce online fraud, in future. Multiple apps could work to underpin digital identity online.

Vision Statements – The Future of Payments

I'd like to leave you with a bit of a vision statement, and some forward thinking about where online payments is going. Let's now circle back around to the quote from Roy Amara that I mentioned at the start of this talk:

“We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.”

If there are two words to describe the retail payments future, they are: seamless, and integrated.

In the future, payments will be hidden in the background of the customer experience, but also underpinned by strong biometric authentication.

¹⁸ IDCare research undertaken for APCA

Purchasing a good or service will be as almost as simple as selecting it. The days of forgetting your wallet will be long gone. If you do forget your wallet, you can pay through your phone, your FitBit or your sunglasses.

Consumer expectations will continue to evolve. During the last decade and a half, consumers have moved from purchasing goods offline to purchasing through browsers. They are now moving to mobile payments. In future, they will expect even greater decentralisation of payment options.

Consumers expect that their smart bracelet, or sunglasses can be used for payments. They will expect that their Alexa device, or their fridge or perhaps even their garden shed could make purchases on their behalf.

Maybe we will even abandon the idea that a consumer should have to carry a payment mechanism (be it cash or card). Voice or facial recognition technology integrated into a website, or offline point of sale terminal may provide the ability for consumers to make purchases simply by saying their name, or briefly looking into a camera on the terminal. Their identity would be biometrically authenticated, and the payment would take place entirely in the background.

We could also see western social media platforms head down the Chinese path and offer strong payments and finance integration.

Or maybe we don't know where everything is heading. Maybe the next killer app will be something that none of us had anticipated.