'Australia's Payment Future: Innovation Drivers in a Less-Cash World' – Dr Leila Fourie -CEO APCA

In preparation for our discussion, I've tried to bear in mind the wisdom of the quote often attributed to Churchill. "I'm sorry I wrote you a long letter. If I'd had more time, I'd have written you a short letter."

As an economist, I'm fascinated by the relationship between how we pay for things and the wider economy. And as our economy becomes more digital, I'm increasingly aware of the scrutiny that cash has come under.

So, as a backdrop to talking about the drivers of change in our immediate "less-cash" Australian environment, I wanted to start by considering some recent global developments.

Figures from last year show that cash is still the most prevalent payment method. With some 500 – 700 billion notes circulating worldwide, it accounts for 85 per cent of all payments[1].

This dominance of cash is attributed to the fact that as a means of payment it is familiar, convenient and ticks many practical and cultural boxes, which mean that despite the well documented and considerable associated cost of cash, there appears to be a reluctance to relinquish use.

But it is cash's other function – that of a store of value – that appears to be at the heart of its stickiness. And it's this function that has brought cash front and centre of economic debate most recently. India, Venezuela and Pakistan have all embarked on aggressive demonetisation programs.

India – The Unexpected Impact of Rapid Demonetisation

By far the highest profile cash story of late is India's demonetisation. Last year, on 8th November PM Shri Narendra Modi announced that from midnight on 9 November, 500 and 1000 rupee notes would no longer be legal tender. He effectively decommissioned 86 per cent of India's currency supply overnight, which was a drastic move in an economy where 90 per cent of transactions are cash.

The rationale for this unprecedented move was three-fold[2]:

- To fight widespread corruption, tax evasion and crime,
- To deal with a surge in counterfeit notes reportedly being used to finance terrorist activities and finally,
- To stimulate the digital economy

All of these reasons have been echoed by Rogoff in his recent book, 'The Curse of Cash'.

---

[1] Cash Repository, *The Role for Crash* www.cashrepository.com/2016/06/the-role-for-cash

[2] For example: The Economist, *India's Currency Reform was Botched in Execution* www.economist.com/news/leaders/21711040-narendra-modi-needs-take-measures-mitigate-damage-his-rupee-reform-has-done-indias and Rahul Prakash Deodhar, *Black Money and Demonetisation* papers.ssrn.com/sol3/papers.cfm?abstract_id=2869172

Modi's unorthodox plan involved the replacement of cancelled notes with new 500 and 2,000 denomination notes and everyone was given 50 days to redeem their canceled banknotes.

While India's finance minister argues that the program has worked, citing an increase in direct tax of 14.4 per cent and indirect tax of 26.6 per cent, many question the benefits.

While the impact of this dramatic policy is still unfolding, it's already clear that some of the goals may be largely unattainable. By the end of December very nearly all the old 500 and 1000 rupee notes had been returned and there are reports citing numerous mechanisms by which counterfeit notes were exchanged for the new notes, leaving stores of value with their original untaxed and unlawful owners.

The immediate economic impact - caused in part by poorly prepared infrastructure, which saw ATMs unable to handle the new notes[3] - was also not insignificant. Some commentary references "catastrophic" short-term results that have knocked 1 to 2 per cent off GDP growth[4]. Worryingly, it's those on lower and middle incomes and the poor that have borne the brunt of this burden[5].

But the digitisation goal is a much brighter story. The providers of e-wallet and other digital payment systems used the demonetisation as a powerful customer acquisition tool. Examples of this include e-wallet Paytm, that saw three times the number of new users and a 167 per cent[6] increase in Oxigen Wallet's daily users.

Ecuador – Government-Issued digital currency

The benefits of digitisation were pronounced as the starting point for Ecuador when it made history in 2015 by becoming the first government to take control of issuing currency digitally. At the time, the Central Bank of Ecuador highlighted that a government led initiative would mean the focus would be on the users of the system and not on the profits generated. As such, it was cited as an important mechanism to bring about financial inclusion for the 40 per cent of the population that are unbanked[7].

Unsurprisingly, more critical economic commentary suggests that it was a strategic move to bring monetary policy back under Ecuadorian control, following dollarisation in 2000. With scant information, available on the success – or otherwise – of the enforced digital dollar, it appears that once again, the drivers for change were less about digital enablement and more about wider economic policy.

---

[3] Euromoney, *Modi's Demonetization Catches India on the Hop*, www.euromoney.com/Article/3606368/Modis-demonetization-catches-India-on-the-hop.html

[4] International Monetary Fund, *World Economic Outlook – January 2017* www.imf.org/external/pubs/ft/weo/2017/update/01/

[5] The Economist, *The Dire Consequences of India's Demonetization Initiative* www.economist.com/news/finance-and-economics/21711035-withdrawing-86-value-cash-circulation-india-was-bad-idea-badly

[6] Forbes, *The Results From India's Demonetization Campaign Are In* www.forbes.com/sites/wadeshepard/2017/01/03/after-day-50-the-results-from-indias-demonetization-campaign-are-in/#356ed5f3552e

[7] The Guardian, *Ecuador Launches New Currency* www.theguardian.com/world/2015/feb/26/ecuador-digital-currency-dollar-rafael-correa

Early discussion in Sweden about an eKrona might help shed light on the lack of positive news coming out of Ecuador. Sweden is one of the most advanced cashless nations and tax avoidance and corruption have been managed by wiring cash registers to transmit data direct to treasury. But even in this highly cashless country – where the amount of notes and coins in circulation in Sweden has fallen by 40 per cent since 2009 – a poll of citizens found that less than 10% were in favour of the eKrona.

This reticence to adopt a digital only currency speaks to the many attachments that we have to cash and underpins the requirement for a gradual and careful consideration of its management.

Australia – Combatting the Black Economy

While it might be tempting to view overseas case studies as curious examples of government led intervention, there's recent activity much closer to home.

In Australia, concerns were raised at the end of last year about the size of the black economy. The cash economy is estimated to be worth $21 billion per year, which equates to 1.5 per cent of GDP.[8] One of the causes for concern is that the use of $100 notes jumped 9 per cent in the past year, well above the long-term growth rate of 7 per cent and far more than the use of $50 notes, which jumped 6 per cent and $20 notes, which increased by just 2 per cent.

In response to this, a newly established government task force has been created to look into revenue lost through cash transactions. Areas of concern include lost tax revenues from 'cash in hand' jobs and welfare fraud.

The task force will look particularly at uses of the $100 note. Currently the $100 note makes up 47 per cent of the total notes by value, but also 23 per cent by number. And the total value of $50 notes in circulation is similar.

But while the Australian cash commission's report is due in October 2017, it seems likely that in this sophisticated and increasingly digital economy, other drivers will provide equal momentum alongside government led initiatives.

Underlying Drivers of the Move Away from Cash

So, what are the other drivers? When we talk about changing payments behavior, we often talk about three parallel forces of change.

There's **technology push**, there's **consumer pull** and then there's **regulation**, which aims to pave a competitively equitable path between the two.

Drivers of Change – Technology Push

"One of the defining characteristics of technology as a driver is that we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run. "

---

[8] ABC News, *Federal Government Taskforce to Crack Down on Cash Economy* www.abc.net.au/news/2016-12-14/federal-government-to-crackdown-on-cash-economy/8118844

Roy Amara, past president of The Institute for the Future

The increasing role of technology is best illustrated by shifts in the world's largest companies over time. Ten years ago, Exxon Mobil was the world's most valuable company, followed by General Electric. Microsoft was the only tech firm in the top six. Today, ten years later, five of the top six firms are Tech companies. They are, in order of size, Apple, Alphabet, Microsoft, Amazon, Exxon Mobil and Facebook[9].

In terms of technology push, the single biggest driver of late has been the move to real time payments. In a world changed forever by the impact of the internet – with its instant real time communication – payments is getting a very necessary wholesale upgrade.

From an APCA perspective, this shift to real time payments, in the form of the New Payments Platform, is now operational. Having helped our members to stand up the project, the company we now know as NPPA, we are shifting our focus to consider the impact of other technologies.

It should come as no surprise that one of the technologies that we are taking a closer look at is blockchain.

Before I cover this is greater detail, I'm keen to highlight that our current focus is on blockchain as technology infrastructure – often referred to as Distributed or Shared Ledger technology – rather than the backbone of the crypto currency Bitcoin. So in terms of use cases, we're interested in the global payment aspects of trade finance for example, rather than the regulation of crypto currencies.

The application of blockchain in the form of use cases is wide and varied, including new solutions in trade finance, digital identity, regtech to name a few. Interesting fringe innovations include for example Bitnation using the bitcoin blockchain to establish an Emergency ID for refugees that would enable family members to verify each other's relationships and fund a bitcoin Visa card

We are actively involved in the work that Standards Australia is heading up in this area and our goal is to ensure that the requirements of the payments industry are understood and reflected in the development of these standards. Building on this, we are also looking at the governance implications of blockchain technology, with a particular focus on digital identity.

In December last year we participated in a pilot that looked at how blockchain could be used to facilitate the sharing of attested customer identities between banks. We are just digesting the learnings from this pilot - and it's something that I look forward to talking about in greater detail in the near future. But it has proved very useful in helping industry identify and start to solve some of the challenges around shared KYC that are at the heart of a digital identity framework. And as the Australian Payments Plan so clearly identifies, as an enabler of convenience and security, digital identity forms an important part of our future digital economy.

---

[9] https://www.weforum.org/agenda/2016/09/farewell-oil-hello-tech-the-world-s-5-most-valuable-companies-in-2006-and-2016?utm_content=buffer1b805&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Drivers of Change – Consumer Pull

This requirement for convenience leads me on to talk about our second driver of change. In a market where seven out of ten card transactions are contactless, the power of consumer pull hardly needs to be emphasised. And it seems likely that an increasing consumer preference for digital payment methods will continue to be an effective driver of change.

Our latest Milestones[10] report shows that ATM withdrawals were down last year in both volume - at minus 6.6 per cent and in value at minus 2.4 per cent. This is matched by a rise in the volume of card transactions, which increased by over 12 per cent, and Direct Entry, which rose by over 7 per cent. Encouragingly, this preference for digital payment methods appears not to be restricted to our younger population – with over half of internet users over the age of 65 conducting banking transactions online.

Globally, many non-traditional players such as fintech organisations and social media tech firms are playing a prominent role in customer pull. In the Western world, Facebook, Amazon and Google have introduced new payment innovations, some of which involve biometrics such as voice activated solutions (e.g. Amazon's Alexa).

An initiative has been piloted in the Netherlands to enable people who rarely carry cash to make donations to homeless people. Each homeless person participating in the scheme is provided with a warm winter coat. The coat has integrated NFC capabilities allowing it to receive payments[11].

Members of the public can simply tap a contactless card on the coat to donate €1 to the wearer. The wearer can then use this value to pay for food, accommodation or training courses. The scheme does not allow the wearer of the coat to simply 'cash-out' at any point.

In this way, it is possible for people to make digital donations with their usual payment cards. They have the confidence that the scheme is being run in connection with the local homeless shelter. They also have the reassurance that the money donated will be used to keep the recipient warm and well nourished.

Moving now from West to East, I was recently struck by the incredible power of consumer pull on a visit to China, where payments are well and truly embedded in online social networks. And I think it's worth reflecting on here simply because of the unforeseen impact. WeChat is the global poster child of social payments and it is the corner stone of Tencent's payments success.

WeChat's unprecedented growth can be directly linked to the "red packet" gifting feature that Tencent introduced. This simple feature, which builds on a long standing Chinese tradition of

---

[10] APCA, *Milestones Report 2016, The Digital Economy* http:/www.apca.com.au/docs/default-source/decline-of-cheques---milestones/towards-the-digital-economy-milestones-report-(november-2016).pdf

[11] https://www.nfcworld.com/2017/01/04/349232/homeless-people-trial-contactless-payments-jacket-charity-donations/

giving loved ones' money in a red envelope, sky rocketed WeChat users of the payment feature from 5 million to 500 million[12] in the space of just over one year. This in turn increased people's overall use of the wallet and has helped pave the way to the establishment of an alternative set of payment rails.

Today, China's internet giants – the BATs (Baidu, Ant Financial and Tencent) – account for 90 per cent of payment volumes, which represents 10 per cent of the value[13].

The success of the so called BATs owes a lot to consumer pull. I have it on very good authority that it was the 2003 outbreak of SARS[14] that helped create consumer demand for online purchasing that Ant Financial's success is predicated on. Fearful of being exposed to the virus outside, Chinese citizens preferred to shop in the safety of their homes, building an audience for Alibaba's online market place and its payment product Alipay.

Drivers of Change – Mediating Regulation

But without the underlying support of regulation, these new markets would not have flourished. In China's case, the central bank introduced specific regulation to support this new category of internet banks, paving the way for the BATs to compete with the incumbents, delivering greater consumer choice.

Closer to home, we see similar pressure on regulation to mediate for a more competitive outcome. And in the digital information age, it is not surprising that regulatory focus has landed on access to data.

I imagine that everyone is familiar with the Productivity Commission's Inquiry into Data Availability and Use[15], as well as the recommendations from the draft report. In terms of enabling consumer pull, the draft report recommends that control of data should be put in the hands of the customer. The summary draft findings make the very simple and compelling point that:

Data is a new resource for our economy and society and there's no good reason to lock it up.

While the specifics of how this access to data will be managed are far from final, it's worth considering the implication for financial services and payments. In effect, it means that in the not too distant future I will be able to easily instruct my bank to share my last year's transactions with a third party payment services provider – be that a local Fintech or an international internet giant – who may wish to offer me payment and loan services based on my financial history.

As is the case with Europe and many other jurisdictions, regulation has a role to play in paving the way for greater competition. It seems likely that Australia's future will be defined by greater access to data and that this will be one of the most significant drivers of change that payments will see over the next five years.

---

[12] TechInAsia, *WeChat Now Has 500million Monthly Active Users* www.techinasia.com/wechat-500-million-active-users-q4-2014

[13] APCA, *2016 Payments Monitor* www.apca.com.au/about-apca/newsletter/payments-monitor-2016

[14] Quartz, *China's Internet Got a Strange and Lasting Boost from the SARS Epidemic* qz.com/662110/chinas-internet-got-a-strange-and-lasting-boost-from-the-sars-epidemic/

[15] Productivity Commission, *Data Availability and Use – Draft Report* www.pc.gov.au/inquiries/current/data-access/draft

Conclusion – The Need to Focus on Identity

So what does this mean for APCA's focus? The thought that I want to leave you with is how vitally important the concept of digital identity is to our ever digital economy. At the simplest level, digital service delivery requires that any service provider be able to securely and conveniently identify the intended recipient of the service online. And in our data focused future, it's important to acknowledge that primary control of access to data is digital identity.

This is as true for government services as it is for financial services and the need for a digital identity framework was called out in the Murray Report[16] that resulted from the Financial Systems Inquiry. Without the convenience and security of a well thought through digital identity framework, we run the risk of being unable to capitalise on many of the potential benefits of our digital economy.

Acknowledgements

I would like to thank Victoria Richardson, Merric Foley and Consult Hyperion for their research and help in constructing this speech.

[16] Financial System Inquiry, *Final Report*
fsi.gov.au/files/2014/12/FSI_Final_Report_Consolidated20141210.pdf