

Transitioning to a Cashless World – the Current State of Play

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Around the world, central banks are looking to replace cash services and escalate their country's transition towards increasingly cashless societies.

They are doing so for a variety of reasons: to inhibit money laundering activities, to choke off terrorist funding, eliminate tax evasion and to extend financial inclusion to under-served populations across the world. This latter point is crucial when we consider some 138 million Europeans, a similar number of US citizens¹ and nearly 40% of the adult population worldwide – about 2 billion people – still do not have a formal account for payments (ie. with an authorized payment service provider)².

Not only this, cash is expensive - requiring vast infrastructures of handling processes and ATM infrastructures. At the same time, and for similar reasons, regulators are exploring ways of de-anonymizing other forms of payments – including those made with pre-paid cards, and are working to reduce the cost of card payments by cutting interchange fees.



In this paper we take a look at the progress being made, the approaches being implemented and the results of efforts aimed at bringing forward a cashless future.

¹ <http://newsroom.mastercard.com/press-releases/europes-financially-excluded-33-are-employed-35-are-aged-18-34/>

² <http://www.worldbank.org/en/programs/globalindex>

Let's start our journey around the cashless world in India, one of the most dynamic payment markets.

In 2016 the Indian government announced it was to undertake consultations with a range of stakeholders, including the Reserve Bank of India and the National Payment Corporation of India (NPCI), in a bid to create an ecosystem that would promote and incentivize cashless transactions. While some of the measures proposed were dialed back on implementation, and there remains much debate in India as to the success of some elements of the plan, the move certainly marks a good first step to transition one of the most cash-dependent economies in the world towards a cashless society.³



India, one of the most dynamic payment markets

It's clear that many consumers relish the opportunity of being able to transact quickly and securely using cashless payment options. The convenience of tap-and-go payments for low-value purchases have already proved particularly enticing for European consumers. In the UK, for example, one-in-10 payments were contactless in 2015. According to data released by UK Cards Association, that number has risen to one-in-five by September 2016 – with the total value of spend on contactless cards some £2.4 billion, with corresponding purchases reaching 275 million.

The move to cashless transactions and electronic payment infrastructures deliver clear benefits for banks, retailers and the economy as a whole. Processing cash is a high cost business, as is supporting extensive ATM networks. Electronic payments also deliver greater transparency and efficiencies when dealing with merchants, and can offer capped interchange fee opportunities. But cashless scenarios do have cost too – not least in those very fees that banks and schemes charge retailers.

While the journey to a cashless world is still in its initial growth phase in many territories, it's fast gaining momentum as new technology innovations continue to drive the growth of cashless payments around the world. Yet despite innovations such as PayPal, Apple Pay, Samsung Pay and a variety of innovative contactless and mobile payment forms, data from Retail Banking Research suggests that

³ <http://www.livemint.com/Politics/4jZ8Aun2KFlrEfochDmeqJ/Is-government-winning-the-black-money-fight.html>

global demand for hard cash remains resilient⁴. The challenge that now faces many banks and governments is determining the best approach for driving consumers who continue to show great affection for cash as a payment medium, to change their habits and embrace a cashless future.

But first, let's evaluate how the transition to a cashless society is progressing around the globe.

Cashless payment - the new Nordic norm

According to the European Central Bank, 66% of all transactions in Western Europe were cashless in 2015⁵. But when it comes to eliminating cash transactions in the foreseeable future, Sweden is leading the way in Europe.

In a country where consumers routinely use bank cards for even the smallest purchases, retailers are now legally entitled to refuse coins and notes. According to Riksbank, the country's central bank, cash transactions only accounted for 2% of all payments made in Sweden last year, and around 900 of Sweden's 1,600 bank branches no longer keep cash on hand or take cash deposits. Indeed, it is the only country in the world where cash circulation is actually decreasing.



While the majority of cashless purchases throughout the Nordic region are made using chip and pin cards, Denmark has made headlines recently when it comes to enabling cashless payments nationwide; in 2016 VISA announced around 4 million contactless cards had been issued here as a response to demand from consumers for the continued digitalization of payments.

⁴ http://www.rbrlondon.com/about/GC20_Press_Release_141215.pdf

⁵ <http://www.visualcapitalist.com/shift-cashless-society-snowballing/>

In an interesting aside, despite the high-minded ideals of the cashless society, there are challenges. Being a cashless country, as Sweden is fast becoming, requires a rock solid electronic payment infrastructure able to withstand all attempts to disrupt or damage it. With little or no infrastructure remaining to process high numbers of cash transactions, the implications of a successful, sustained cyber-attack that knocks out the electronic payment network would have negative consequences. Authorities are aware of this and protection will remain a high priority.

Australia, Canada and the U.S.

The introduction of contactless payment cards in Australia in 2010 has proved highly successful at eroding consumer use of cash and ATMs. According to MasterCard, around 35% of all transactions were cashless in 2015 and the Australian government is now readying itself to introduce a cashless welfare system, in which up to 80% of a person's payment will be placed on a bank card that cannot be used for alcohol or gaming purchases⁶.

In Canada, the government's commitment to a cashless society is gaining traction, with 75% of retailers now accepting contactless payments. According to MasterCard, 27% of in-store purchases were contactless as of September 2015. Meanwhile, a recent report by Moneris showed a 162% increase in tap transactions for the third quarter of 2015 compared to the previous year⁷.



Meanwhile, the introduction of Chip payment cards in the US in October 2015 – alongside mobile payment innovations like Apple Pay – has helped paved the way to widespread consumer take-up of

⁶ <http://www.abc.net.au/news/2015-10-15/government-criticised-for-rushing-through-cashless-welfare-card/6855620>

⁷ <http://www.newstbc.com/2016/01/01/canada-walks-the-road-towards-cashless-society/>

contactless payment instruments. There's undoubtedly a move away from cash in the US. The latest available statistics⁸ showed a 4.4% increase in cashless transactions in 2014 – putting cashless transaction levels ahead of cash for the first time. As we move into 2017, the figures suggest a global figure of well over 600 billion transactions per year.

Evaluating the cashless options: mobile, debit and contactless

The Swedish financial sector has reported it has become more cost-efficient as a result of eliminating the manual cash processing and distribution and the associated reduced spend on security. Norway's central bank has also reported that cash transactions are nearly double the cost of card payments, highlighting a significant incentive for businesses to make the move to cashless. Other benefits that accrue to businesses becoming cashless include faster payment transaction times, improved customer service, greater operational efficiency and a reduced cash handling burden.

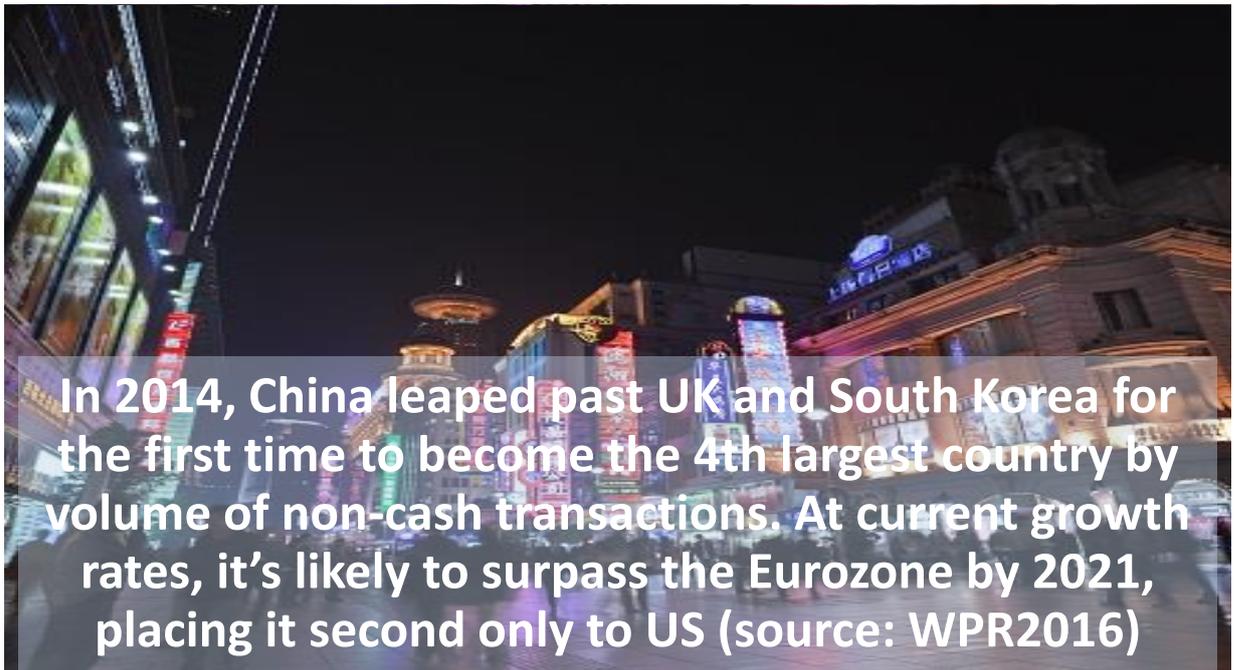


In a similar way, banks in the Netherlands expect to reach the 60% cashless mark by 2018 – with contactless transactions, as well as those via mobile devices, playing a key role in achieving the transition. Cashless transactions in the Netherlands represent 6.2% of total EU transactions, while the Netherlands population accounts for just 3.7% of the EU. A number of shops do not accept cash any longer. The most popular Internet payment method in the Netherlands is iDEAL, generating over 180 million transactions that are processed as credit transfers. Contactless payments were

⁸ <http://www.visualcapitalist.com/shift-cashless-society-snowballing/> and <https://www.worldpaymentsreport.com/>

introduced in the Netherlands in 2014 and quickly gained momentum with 135 million contactless payments reached in 2015.⁹

The success of cashless policies rests on the acceptance of the various cashless mechanisms by consumers. This, in turn, is subject to operational issues such as availability of appropriate terminals and perceived issues of security. The surge in the availability of innovative new mobile payment options is a good example. Conceptually mobile payment is incredibly popular. In reality, the lack of universality of acceptance technologies, combined with the continued dominance of card-based options, has kept usage figures low. While China's consumers have certainly embraced mobile payment via their phones, consumers elsewhere remain reluctant when it comes to adoption of mobile payment technology – with security is proving a primary concern. According to a recent Accenture survey, 52% of North Americans were extremely aware of mobile payments, yet just 18% used them on a regular basis¹⁰.



Whether security is the major barrier to mobile adoption is a point of debate. However, it certainly seems that, should fraudsters get past the protections, the impact of mobile fraud is significant for retailers. Recent figures indicate mobile payment fraud is now the costliest of all types of fraud – with investigation and remedial activities adding more expensive above and beyond the initial fraud itself. This is one area where the lack of appropriate tools and poor training is making it hard for merchants to keep on top of the problem.

The challenge for mobile payment instruments, however, is that these sit at the intersection of finance and telecommunications and face regulation from both. Furthermore, widespread consumer concerns about the security and safety of using their mobile device as an alternative to cash transactions continues to impact adoption. It's proving a particular disincentive in those territories

⁹ European Payments Council (EPC)

¹⁰https://www.accenture.com/t20151021T165757_w_us-en_acnmedia/Accenture/next-gen/na-payment-survey/pdfs/Accenture-Digital-Payments-Survey-North-America-Accenture-Executive-Summary.pdf

where the widespread prevalence of contactless payment cards and other formats already offers consumers a secure cashless alternative.

Quick, easy, familiar and convenient, contactless technology has quickly become the cashless payment instrument of choice for consumers around the globe. Confident using contactless for low value payments, bank imposed spend limitations typically give users the added confidence of knowing that they will need to provide Chip and PIN verification when undertaking larger transactions.



Demand for contactless cards soars – over half of all smart card shipments featured ‘tap and go’ technology outside the Americas - a 24% growth as compared to the year before (source: SPA).

To date, fraud on contactless cards has been limited, as detailed by the SPA in its [2016 paper: Investigating the myths and realities of contactless payment fraud](#). Similarly, figures produced by the UK Cards Association show that in the first six months of 2015 the level of fraudulent transactions using contactless cards was equivalent to just 2p for every £100 spent using the technology. Moreover, according to a 2015 report by the Observatoire Banque de France, the 0.015% fraud levels it observed for contactless card payments resulted from cards being lost or stolen.

As Retail Banking Research confirms, with cashless payments other than cheques becoming more common around the world as consumers respond to campaigns launched by banks, retailers and governments to reduce cash usage, cards in particular are increasingly being used in sectors which would have been the preserve of cash in the past¹¹.

And as consumer demand for new, discrete and wearable contactless payment options that can be added to the wearables they already own – like watches and fitness bands – burgeons, the opportunities to deliver new contactless options that make it fast-paced and easy for consumers to pay will help to further ease the transition to a cashless society vision.

¹¹ http://www.rbrlondon.com/about/GC20_Press_Release_141215.pdf

Into a cashless future

The success in the adoption of debit contactless cards represents a significant step forward on the road to a cashless society. The second stage of the journey will become possible should mobile contactless payments achieve significant market share. The third stage adds more (non-card) ways to pay and towards widespread adoption of virtual currencies (initially driven by millennial audiences).

The recent Draft of the Regulatory Technical Standard on Strong Customer Authentication by the European Banking Authority (EBA) supports this journey through its statement that contactless card payments below 50 Euros will be exempt from strong customer authentication requirements. In the same way, the second iteration of the Payment Directive on Services (PSD2) has put in place protections and policies that will extend ways to pay – focusing specifically on streamlining transactional relationships between merchants and banks.



Of course, as SPA is keen to highlight, this technological evolution cannot be achieved at the price of increased fraud. But here, contactless transactions have proved secure – not least because the contactless card is authenticated in a hundredth of a millisecond prior to the payment. This is possible as a contactless card is a duly certified, physical device. It features anti-tampering security properties, and currently offers the highest level of acceptance at the physical point of sale.

The technology, processes and protections are in place to create a fully-cashless society today – assuming efforts to fortify infrastructures against potential (and unseen) attacks keep pace with the sophistication of cyber criminals.

Ultimately however, it will be the consumer who decides how far we go. There are perception issues to deal with – not least in terms of security. And cultural factors will continue to play a key role in adoption rates.

We have seen a positive start and find ourselves a good distance down the road. For our part, the SPA supports this cashless vision, and recommends robust infrastructures and an element of continued caution in the selection and promotion of non-card cashless payment solutions.

We continue to monitor the market, analyzing the impact of the latest technologies and approaches – with forthcoming SPA papers exploring the growing wearables sector, instant payment security and the issues around blockchain security and interoperability.

About the Smart Payment Association



The Smart Payment Association addresses the challenges of the evolving payment ecosystem, offering leadership and expert guidance to help its members and their financial institution customers realize the opportunities of smart, secure and personalized payment systems & services both now and for the future.

www.smartpaymentassociation.com