Assessing cashless risk

De La Rue Currency interviews Sabrina Rochemont, a member of the Cashless Society Working Party to discuss her opinions on the societal impact of a cashless economy.

"I feel strongly about cash as a public good and as a token of freedom."

For the benefit of our readers, please could you give us a brief background to yourself and your relationship to the cash industry?
I am a volunteer member of the Cashless Society Working Party, hosted by the Institute and Faculty of Actuaries (IFoA), the chartered professional body for actuaries in the UK.

Its research delivers a neutral, analytical assessment of developments to comprehend benefits, risks and issues of a cashless society at a global level, in the public interest. It provides insights into specialist economic topics, and identifies opportunities to learn from international experiences, and to adapt public policy.

The Working Party has no vested interest in the cash industry. The views expressed in this contribution are my own, based on my research and thinking, and not necessarily those of the IFoA or any other organisation or employer.

What previous work have you published on the topic of cashless payments and potential impacts?
Our first [working party] paper established a register of risks and issues associated with the transition towards a cashless society, compiled from data in the public domain. I realised (in 2017) that no-one seemed to be talking about the environmental impact of payments, despite the growing concern about climate change.

A literature review revealed scarce research, other than banknotes; life cycle assessments from the Bank of England and the Swiss National Bank are reference materials for polymer and paper notes. The De Nederlandsche Bank evaluated the impact of debit card payments.

I see closing the knowledge gap as the first step required to improving performance and mitigating the effects payments have on the environment.

Cashless payments rely on a transactional business model and need significant infrastructure. Does such a system offer significant benefits to the retailer and customer?
We are experiencing a fundamental change in the use of money, in the UK, shifting from the dominance of cash as a public good that is financed centrally, to an expanding and increasingly complex ecosystem of commercial cashless payment solutions that consumers (indirectly) or businesses (directly) pay for with each transaction. The impact is different for each stakeholder. Retailers have to weigh up the costs of using cash, such as: counting up, making trips to a bank if available, and the associated risks, time, and insurance costs of handling cash, compared to acquiring and merchant fees. Customers in most developed countries are charged indirectly for each electronic transaction, as the cost is borne by retailers as part of their overheads. Users of mobile money in developing regions pay directly for fees above certain thresholds for peer-to-peer transfers.

Several countries are now studying the possibility of issuing digital cash, known as Central Bank Digital Currency (CBDC). This will enable the public to have access to a digital central bank liability. China is piloting their digital currency in some provinces, and other countries are exploring designs. The Bank of England has been consulting over a model that would see the CBDC distributed to the public through payment service providers, as a central bank is not equipped to manage retail accounts. This would mean the public and retailers would pay transaction charges for this digital public good.

How do you think societies would cope without access to cash?
A number of risks and issues are associated with the loss of access to cash. As part of our research, we identified 21 of these, including the environmental impact. (*Figure 1*). Each of us is sensitive to different aspects; I feel strongly about cash as a public good and as a token of freedom. Also, the change towards digital payments and a digital economy more broadly is increasingly excluding people in developed countries, leaving people behind. But this is avoidable, in situations where cost is the barrier to access, as emerging markets have shown with mobile money and the development and distribution of basic smartphones. This requires political will to manage these risks and issues throughout the transition.

Cashless society: risk assessment

Issues	Risks
Hidden agendas	A cashless society may not live up to its promises
Trust in banks	Displacement towards alternative means of payment
Trust in governments	Totalitarian regimes
Economics of money	Sovereignty risks
Financial Exclusion	End to the right of a private life?
Change leadership	Innovation marketplace and user experience
Digital economy readiness	Lack of competition on payments market
Security of transactions, data and biometrics	Excessive reliance on technology
Social value of cash	Politics vs innovation
Removing cash may stall the economy	Financial stability
Environmental sustainability	

Fig 1: "A Cashless Society: Benefits, Risks and Issues", IFoA, 2017 - 2018

What is your opinion on the public's comprehension of the environmental impact of cashless payment systems?
Generally, I perceive that the public's comprehension of the environmental impact of their consumer choices is limited to the tangibles, such as packaging, waste recycling and means of transport.

The revelation of the energy use of bitcoin mining seems to have had limited effect, as it probably would not have discouraged proponents from transacting bitcoin or other consensus-driven cryptocurrencies. It has provided an additional argument for the detractors against its adoption, but the topic has remained confined to mining bitcoin, and the interest was limited in time.

The lack of content on this matter suggests that the public has yet to come to terms with the fact that our convenience and choice of solutions have consequences for the environment. Education will be possible once objective and thorough research on the environmental impact of payment systems becomes available.

Would emissions targets offer any benefit to curbing carbon emissions from data centres and individuals such as bitcoin miners?
The measurement of the impact for each component of the electronic payment supply chain may lead to some surprising results. Data centres have bad press, as they consume so much power. However, if we were to evaluate the productivity for each asset type instead, based on the environmental cost per transaction, I suspect the cumulative emissions of ATMs, smartphones and point-of-sale terminals might prove more onerous than data centres.

What could be done to mitigate the environmental cost of bringing cash into the cash cycle?
The introduction of polymer notes was a great step towards the improved sustainability of cash payments, because banknotes are kept in circulation for longer, but they still need to be physically transported and dispersed. The Wholesale Distribution Steering Group has included the minimisation of the environmental impact of the wholesale distribution of cash as a success criteria as part of their UK consultation of the ecosystem for a utility model.

The consultation does not however seem to consider the potential for ATMs to be upgraded to more energy efficient cash recycler models, which would keep cash in circulation in an area for longer periods of time.

Newer, more efficient technology could, to a certain extent, improve the productivity of ATMs. As this would involve upgrading ATMs, further opportunities may be considered, such as repurposing ATMs into virtual branches in enclosed and secure commercial premises, such as petrol stations or post offices.

Offering enhanced functionality and multiple services. Some booths may enable customers to pay in or withdraw cash, access online banking, as well as contact their bank by secure video link for more complex transactions. Other financial services could be offered for purchase, such as insurance, investments, and payment of utility bills.

Such high security terminals could help address the closure of branches and improve the ability

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of rural customers to access a wider range of services. Costs could be leveraged across multiple industry players for a more sustainable model.

Are governments better adopting a pro-active stance to regulate the adoption of cashless technology and the influence of technology corporations who drive such technologies?

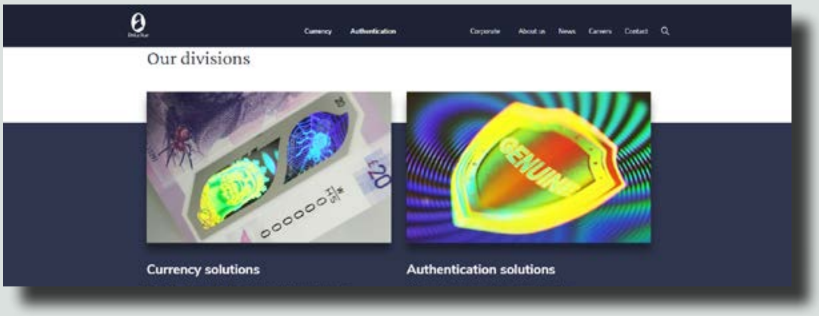
Developed countries have been sleepwalking into a cashless society, whereas governments in emerging markets have been proactive in their development goals. Business has brought phenomenal levels of innovation in payments; regulators by nature follow the curve, but hardly anticipate it, although the Libra announcements in 2019 jolted them into shock, then coordinated action.

Technology by itself is unproductive without other components of services, i.e., processes and people. Many countries provide regulatory sandboxes to enable experimentation and provide a safety net for innovators and consumers. Let's remember that innovators also require regulatory certainty and stability to develop. Governments need the innovators for growth, employment, and competitive advantage.

What are some of the most important drivers for the retention of cash in an environment of multiple payment methods?

Central Banks will support the ongoing provision of cash, as long as consumers can access it, choose to use it and businesses accept it. While many variables influence these choices over time, cash services will have to adapt their economic model and demonstrate the ongoing value of cash.

De La Rue website refresh goes live



Our website has been refreshed and is full of useful information for central banks, banknote issuing authorities, governments and brand owners.

Please visit www.delarue.com to find out more about the latest industry information, as well as the products and services available.

Our site has been designed to help you understand how our expertise can help you secure your banknotes, documents and goods against counterfeiting and illicit trade.

A collection of case studies, white papers, newsletters and other articles are available on multiple topics ranging from the latest in security through to the impact of COVID-19.

We hope it provides you with what you need, if you have any questions, please contact us.

Have you considered that banknotes may benefit you indirectly?

The need for the unbanked, underbanked and vulnerable members of society to have access to cash is well reported. Billions of people around the world rely on cash and it is important even when payment choice exists. For instance the Access to Cash UK study reported that 8 million adults would struggle to cope in a cashless society.

There are also indirect benefits to many if cash is available as a payment choice.

For society the act of issuing banknotes can generate funds for public finances and tax payers (via seigniorage - see our post on 9th August).

For some individuals cash is there "just in case" - countries who experienced a recent surge in banknote demand have demonstrated this reassurance is needed. Cash also provides payment choice, which is important in its own right and brings other benefits. Importantly, it is free to use and provides competition to other payment methods, helping keep fees down.

For businesses cash helps avoid hidden fees and minimises the risk of increasing payment fees. It is also instantaneous, thus helping businesses that are struggling with cash flow.

More examples exist. Banknotes continue to provide indirect benefits to people that they may not realise.

Posted on 19th August, 2020.