

The future of the UK's cash infrastructure, June 2019

NoteMachine white paper

Introduction

Recent Which? research has highlighted the scale of the problem facing free access to cash in the UK: 2.2 million people depend entirely on cash, and as many as 25 million people rely in some way on free access to cash. Access to cash, especially free access, is under major threat. Cash usage dropped by 16 per cent in 2018 and ATMs closed and /or switched to pay-to-use models at an alarming rate.

To safeguard the future of free access to cash, large scale reform to the cash distribution infrastructure and reimbursement system is needed. A universal system should be implemented which does not discriminate against smaller market players whilst unfairly protecting the interests of large banks.

This paper puts forward a set of features that must be considered as part of the future of the cash infrastructure. Specifically, it is aimed at informing the work of the newly formed Joint Authorities Cash Strategy Group.

It outlines how government, regulators and industry can ensure the long-term future of free access to cash. These features include:

1. A reduction in large infrastructure costs i.e. the number of cash centres;
2. More accessible input cash devices rolled out across every major UK retail centre; and
3. An increase in the use of AI to help better identify local demand.

Together, these features would ensure a smoother, more efficient and, ultimately, more economically viable cash infrastructure system. The cost of infrastructure would be radically reduced, given the more efficient use of AI to determine local cash demand via a constant feedback loop.

Underpinning these changes, however, must also be an economic and regulatory environment in which all market players can operate. In the first instance, this should involve the immediate return to LINK's previous cost-study mechanism that determined the interchange fee, audited by KPMG. In the longer-term, all cash devices should have a cash input mechanism on an interchange basis. This interchange fee should be a universal multilateral one (MIF) on a free basis where card issuers pay. This should be regulated and independent of LINK.

Context

While a great number of recent reports have looked at cash and its importance for certain groups or geographies, such as the Access to Cash Review and Treasury Committee inquiry into access to financial services – both of which NoteMachine welcomed - they have failed to identify the real issues at play and provide genuine solutions.

The UK public has enjoyed free access to cash for the last decade. Almost all withdrawals in the UK are free at the point of use and the spread of cash machines outside of banks has increased consumer choice and accessibility. There are currently 50,000 free-to-use ATMs in the UK, and many of these are clustered in the same areas, such as towns, busy high streets, and retail centres.

Whilst the number of transactions has declined slightly, the number of withdrawals has gone up. With over 2.9 billion cash withdrawals across the UK in 2018, cash is still widespread and the primary payment method for large numbers of people. Many people still see an important role for cash in their lives, particularly when making smaller transactions, and over 50 per cent of consumers in the UK use their card at a cash machine every week.

Cash usage across the UK has been falling for the past ten years, with the percentage of payments by cash dropping from 63 per cent of all payments to 34 per cent. However, throughout this period the number of ATMs has risen substantially. In order to reduce the number of ATMs, particularly in urban areas, LINK made a decision to reduce the interchange fee by 15 per cent in three instalments from July 2018. The interchange fee is the cost paid to independent ATM operators by banks for each transaction.

The reduction in the interchange fee has affected the economic viability of free-to-use ATMs, particularly those in rural and isolated areas which experience less footfall. The first two reductions in the interchange fee, in July 2018 and January 2019 respectively, have placed unprecedented strain on ATM operators, causing many to convert their machines to a pay-to-use model.

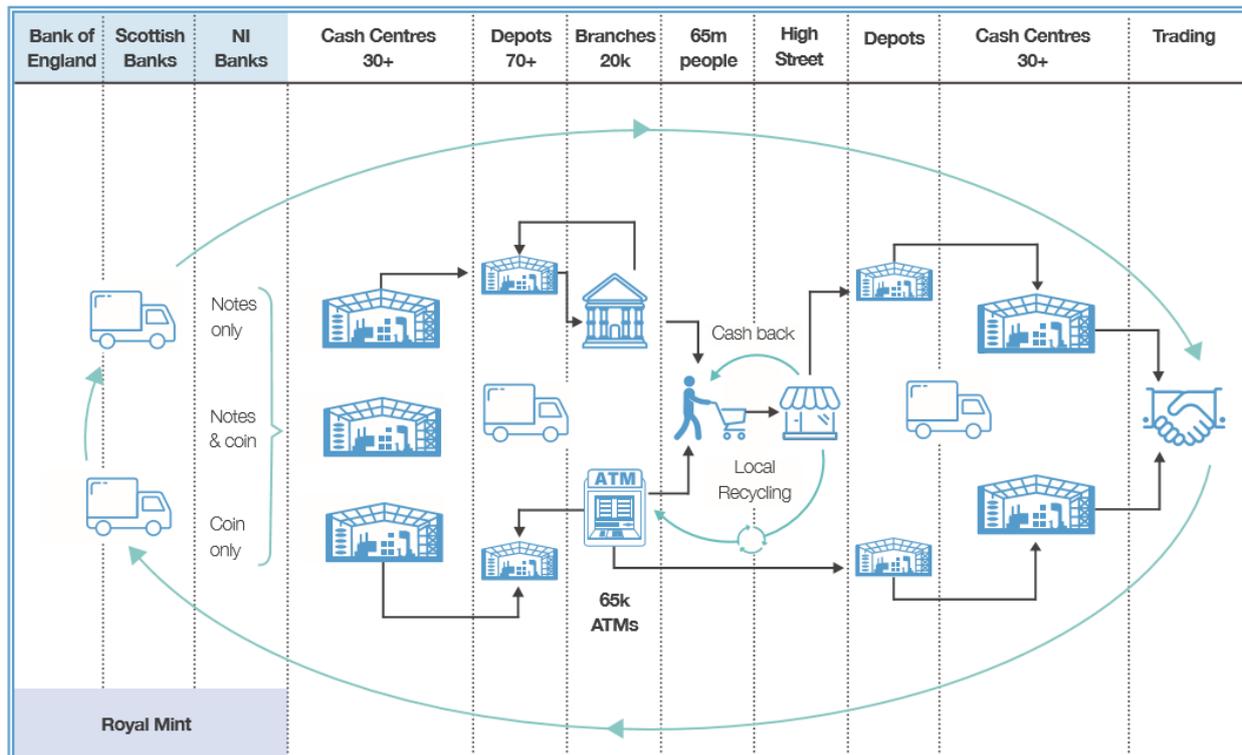
Since the reductions, there has also been a significant reduction in ATM numbers. From July 2018, there were circa 3,500 fewer ATMs in total (5.3 per cent) and circa 2,100 fewer free-to-use ATMs (4 per cent), an annual reduction of around ten per cent which positively corresponds with the 10 per cent reduction in the interchange fee.

As a result, the inefficiencies in the cash infrastructure system have become increasingly apparent as the cost of tracking and moving cash has become clear. This is why it is essential there is a wholesale reconfiguration of the UK's cash infrastructure.

The existing cash cycle

The current cash infrastructure involves 30 cash centres which receive their notes directly from central banks. Cash is then distributed via lorry to 70+ depots, and from there to 20,000 branches and the 65,000 ATMs. This cash is then used in the local economy, from where it is eventually deposited into banks and makes its way back to depots, and cash centres, before going back to central banks.

See the below diagram of how the existing cash cycle works:



This process is currently extremely costly and inefficient. Cash is often moved to areas where it is not needed, left in places where it needs to be removed, and moved piecemeal to areas which make it extremely expensive.

This is in part due to a lack of real-life data used throughout the process, meaning there is insufficient information informing the movement of cash across the UK.

The case for a more “utility approach” to cash

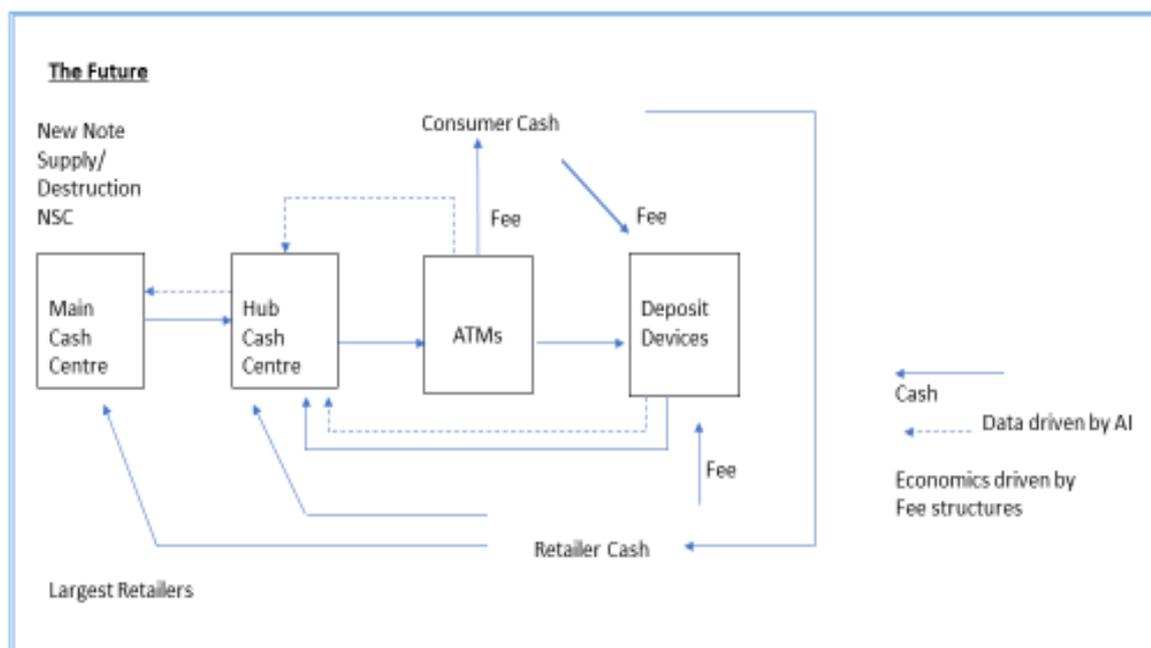
The current cash infrastructure does not account for demographic need and is too heavily weighted towards those areas where there is significant demand for cash. This does not reflect the needs of the population to have free access to cash, rather than those areas with the largest population.

Reform of this system is particularly urgent as large banks continue to close their local branches, which the current system heavily depends upon. A radical overhaul is needed to reduce large cash centre operations and introduce a cash input mechanism across the UK. This would be implemented via devices that enable retailers and businesses to deposit cash in real time into their accounts and receive same day value. This would help avoid retailers having to travel long distances to their local bank branch to deposit cash. It would also help reduce their costs further as the input fee would be set at a fairer price than bank’s current fee for doing this.

A far greater real-time analysis of data from cash input and output within the system means AI can optimise the delivery and collection of cash on a real just-in-time basis. This would dramatically reduce the amount of physical cash needed to operate the system, lower costs and increase access for all.

NoteMachine’s proposal aims to halve existing infrastructure costs, namely by reducing the need for cash centres and depots, with improved ability to respond quickly to changes in consumer demand in localities.

The below diagram illustrates NoteMachine’s vision for a changed model of UK cash utility:



Fundamentally, NoteMachine proposes a more streamlined and cost-efficient infrastructure which, principally, would be driven by AI and data to identify where cash is most needed in certain localities. This would allow a level playing field for players of all sizes, not just the large banks, and ensure cash is recycled more quickly in localities.

Specifically, NoteMachine is calling on the JACS Group to consider the following three features as part of the future cash infrastructure:

1. Reduction in cash centres

Unlike with the current cash infrastructure, NoteMachine proposes dramatically reducing the number of large cash centres from 30+ to 15, as well as their individual sizes. Similarly, the depots to which cash currently flows, should also be reduced from 70+ to 35.

After passing through consumers and retailers, often, the banknotes that businesses and banks receive in payment are returned to one of the Note Circulation Scheme (NCS) members, either directly or through a bank. This is because banknotes need to be stored securely or because banknotes don't earn interest, so retailers pay them into a bank where they can earn interest.

However, some retailers and businesses use banknotes received from customers to fill their own ATMs, for example. This is known as local recycling, whereby notes are not returned to an NCS member and authenticated, they are put straight back into the local cash ecosystem.

Hence, NoteMachine argues there isn't the need for the current number of large cash centres and depots. Through more local recycling, and an increase in input cash devices (see below), the cash ecosystem can be localised, streamlined and made more cost-efficient, ensuring cash is located where it is most needed.

2. Input cash devices

As above, for local cash recycling to be increased, it is essential the number of input cash devices or ATMs that have deposit-taking capability is increased. Allowing businesses to pay

in or deposit cash more easily and cost-efficiently means generating real-time credit is much easier.

However, these machines need to be rolled out on a much larger scale across every major retail centre in Britain. Only then can they start to replace the need for having costly cash centres that store cash ineffectually.

3. Better use of data / artificial intelligence

To further enhance any future emphasis on local cash recycling, AI needs to be the key driver of this. And so, any reform to the current cash infrastructure must commit to continuously looking at device level activity, in turn, allowing things like rescheduling of deliveries and collections.

External data inputs from history and changing footfall, as well as local input (e.g. major sporting events, school holidays etc.), would add invaluable data to the overall AI engine which, ultimately, can help to better determine the movement of cash. Just-in-time delivery and real time credit input, though things like input cash devices, would dramatically improve cashflow and lower economic friction.

An economics driven by fair fee structures

Underpinning these three features, however, must be a sustainable economic and regulatory environment in which all market players can operate.

For this level playing field, all cash devices should have an input mechanism on an interchange basis. This interchange fee should be a universal multilateral one (MIF) on a free basis where card issuers pay.

This would still be applied to ATM surcharges that enable such machines to have lower transaction costs. This is so that the market can compete for transactions, creating greater free coverage through competition or retailers paying a contribution.

Next steps

In light of the above, NoteMachine is calling on the JACS Group to:

1. Consider its proposal for a utility approach to cash, including incorporating a reduction in large cash centres, an increase in input devices, better use of data and artificial intelligence, and an economics driven by fair fee structures.
2. Commission an independent economic study from a regulatory point of view looking at how value is distributed throughout the supply chain and addressing monopolistic behaviour from the banks and card providers.
3. Urgently reinstate the original KPMG cost-study mechanism that determined the LINK interchange fee to stabilise the market whilst a longer-term solution can be found.
4. Ensure the JACS Group has protecting the role of ATMs as the primary means of accessing cash as a core objective of its work programme.

NoteMachine is looking forward to continuing its work with government and the regulators to ensure fee access to cash for the UK's most vulnerable can be maintained.