



ACCESS TO CASH REVIEW

Final Report

March 2019

About the Review

In July 2018, the Access to Cash Review was launched, chaired by Natalie Ceeney CBE, to look at the future of access to cash across the UK.

The Access to Cash Review was commissioned as a response to the rapid decline in cash use, among growing concerns about whether we're leaving people behind who can't use or access cash in an increasingly digital society. It has been funded by LINK, the UK's largest cash network, but is independent from it.

Over the past year, the review conducted extensive research into payment methods trends, international developments, consumer needs and behaviour, and the financial and economic drivers of the cash economy. Through workshops and in-depth interviews, the review met with and received written evidence from over 120 organisations and individuals representing communities and consumer interest groups, as well as regulatory and commercial stakeholders. The review looked at global trends in cash usage, and met with policy makers and market participants in Sweden (which has the lowest cash use globally). The review also commissioned an online survey of 2,000 nationally representative UK consumers. The review has met with regulators, banks, industry experts and consumer groups to understand the economics and practicalities of cash and digital payments so we can draw together a set of recommendations which meet consumer needs, and also work economically and practically.

This report is the second and final of two publications. The interim report was published in December 2018, and explored the question 'Is Britain ready to go cashless?' It summarised trends in cash use, and underlined conclusions about the likely levels of cash use in Britain 15 years from now. It looked at technology's role both in driving changes in payment behaviour, and as a force for inclusion and exclusion. It also examined the potential risks of an unplanned cashless society. It's replicated in full at the start of this report.

This second publication, the full Access to Cash Report, explores the end-to-end cash cycle and proposes a concrete set of actions for policy makers, regulators and commercial entities.

The review panel have, from the start, seen their goal as not just producing well-researched analysis, but also working with all the participants and stakeholders to produce sensible, clear and proportionate proposals which can be implemented.



It's essential that people's freedom to pay for goods and services however they choose is protected as we transition to an increasingly digital society. The work of the Review is fundamental to identifying some of the ways this transition can be managed. There are also urgent actions for the Government in this report, and a clear need for strong regulation to protect the interests of millions of people who rely on cash in their day-to-day lives.



Which?



Many, especially the more affluent and technologically savvy, now live mostly cashless lives. That's exactly why protecting access to cash is so important. We must learn lessons from the past and plan now to protect those who need it in future.



Martin Lewis, MoneySavingExpert.com



Foreword

We're hearing more and more talk of the 'cashless society'. Almost every day there is another story in the media of bank branches and rural ATMs closing, or pubs, restaurants, charities and shops going cashless.

Ten years ago, six out of every ten transactions were cash. Now it's three in ten. And in fifteen years' time, it could be as low as one in ten.¹ The independent Access to Cash Review was commissioned against growing concern. Consumer groups worry about the closure of rural ATMs and bank branches, leaving people without easy access to cash. Small business associations are concerned about the growing challenges of handling cash: closing bank branches and rising charges make it more expensive and riskier to handle cash. Rural communities see an increasingly digital world that only works for those with broadband and mobile connectivity. And the commercial players supporting the cash infrastructure are questioning how a model built for a high-cash economy can be economically viable when most payments are made digitally.

In this final report, chapters one to four look at the questions we raised in our interim report, published in December. Then in chapters five to eight we look at what measures are needed to make sure no one is left behind as we move towards a cashless society.

Our interim report showed that – as of today – the UK is not ready to go cashless. 17% of the UK population – over 8 million adults – would struggle to cope in a cashless society. While most of society recognises the benefits of digital payments, our research shows that the technology doesn't yet work for everyone. Sweden, the most cashless society in the world, outlines the dangers of sleepwalking into a cashless society: millions of people could potentially be left out of the economy, and face increased risks of isolation, exploitation, debt and rising costs.

We haven't taken a view about the merits of a cashless society. We haven't concluded that it's impossible, or even undesirable. But our research shows that if we fail to plan and prepare for it properly, a cashless society would do significant harm to the millions of people who would be left behind.

Our final report shows that we need to take action, and that there are solutions we can adopt to ensure that no one is left behind which are practical and affordable. We can be more innovative in the way we enable cash access. We can develop digital payments technology in a more inclusive way. And we can re-engineer the cash infrastructure to make it lower cost and more sustainable, so that it can support cash for longer.

We can't wait long for action. Once infrastructure has gone, or communities have been harmed, rebuilding is very hard. But if we act now, we can take steps to stop harm happening, and prepare for a world of lower cash, without societal and economic damage. This report makes detailed but actionable recommendations as to how Britain can plan now for a world with fewer cash transactions. This means supporting those who depend on cash and including everyone in our future digital economy.



Natalie Ceeney CBE,
Chair

A handwritten signature in black ink, appearing to read 'Natalie Ceeney'.



It's no longer good enough to see cash as just a commercial issue. It needs to be treated as a core part of the UK's infrastructure.

Natalie Ceeney



Executive summary

Cash is in decline. But Britain is not ready to go cashless, because digital payments don't yet work for everyone. The consequences to society and individuals of not having a viable way of paying for goods are potentially severe. Our work shows the way forward. Consumers need a guarantee that they can access and use cash for as long as they need it. This requires us to radically review our cash infrastructure – something that is now pressing, as cracks in the system are showing. At the same time, we need to ensure that digital payments can eventually become a choice for everyone.

Sleepwalking into a cashless society will leave millions behind. Action is needed now.

The convenience of digital payments has made them the first choice of payment for many. New technology is making digital payments even easier but there are some areas of society where cash payments still dominate. A straight-line trajectory of current trends would see an end of cash use by 2026. However, we believe that cash will still be here in 15 years' time, but potentially accounting for as few as one in every ten transactions.

Our research found that around 17% of the UK population – over 8 million adults – would struggle to cope in a cashless society. For many people in the UK, using cash is not a matter of choice, but of necessity. Digital payment options just don't yet work for everyone. We encountered a widespread perception that the elderly are the most reliant on cash, but our research refutes this. For a start, poverty is the biggest indicator of cash dependency, not age. Our research also showed a wide range of needs for cash. Some of these are likely to reduce over time (37% of the population said that they need cash because local shops or services don't yet take digital). But other needs will require thoughtful and tailored solutions, including physical or mental health issues which make it hard to use digital services (2%), the risk of overspending and going into debt (9%) and those who rely on others to buy things for them (4%). For these groups, cash offers a degree of control which digital doesn't yet achieve. Our research also found that there are some serious risks of sleepwalking into a cashless society before we are ready – not just to individuals, but to society. We identified risks to the viability of rural communities, the loss of personal independence and increased risks of financial abuse and debt. We don't believe that leaving this many people behind is an acceptable outcome for the UK, and our research also highlighted that it's not what most people in the UK want.

We have not taken a view on whether it is desirable or not for Britain to eventually go cashless. There are many different views about the desirability of a cashless society, with strong

advocates for cash as well as for removing cash. We do, however, believe that digital payments offer benefits for many, whether through lower prices, better ability to manage money or lower theft risk and reduction of the black economy.

There are technological developments which could address many of the needs of those who depend on cash, as well as increase inclusion. Some of this technology already exists in parts of the UK economy or overseas, and the UK has an international reputation for financial technology (FinTech) innovation. But we also know that the vulnerable are rarely early adopters, and technology is often designed for the mass market rather than for the poor, rural or vulnerable. As it stands, there is a risk that digital payments innovation could continue to focus predominantly on the 80% who are mainstream adopters, not the 20% with more challenging needs. A concerted effort will be needed to ensure that digital payments technology is designed for everyone in society – and we believe that this should be a core goal for policy makers.

The decline in access to ATMs is just the tip of the iceberg. To understand how to maintain cash, it is essential to look more deeply. The debate about cash access and use in the UK often focuses very narrowly, just on ATMs. There is no doubt that the UK is starting to see a decline in the number of ATMs, and that problems are arising where people can no longer access cash. But our research shows that this is simply the most obvious symptom – the underlying issues being far bigger and more complex. Insight from Sweden and China demonstrated that the issue of cash acceptance by merchants and retailers was more likely to drive the death of cash than issues around cash access. We have concluded that this will be the case in Britain too. As one consumer group told us, 'there is no point protecting access to cash if you can't use it'. But again, pinpointing what is leading retailers and merchants to stop accepting cash acceptance is far from straightforward. Our research has shown that the biggest drivers of merchants and retailers refusing to accept

cash are the rising costs of handling and banking cash, driven in turn by the underlying economics of cash handling and distribution. One of the biggest imperatives to keeping cash viable over the coming years, therefore, is to rethink the economic model underpinning it. As we stand, we have a cash infrastructure which is fast becoming unsustainable, with largely fixed costs, but where income is declining fast. A whole-system view and set of solutions is necessary. Simply addressing one part of the issue – such as ATMs – is very unlikely to work in a sustainable way.

It is hard to discuss cash without addressing its role in the black (illegal) and grey (informal) economies. There is clear evidence that cash plays a large role in facilitating crime because it's untraceable. Some proponents of a lower cash society go further, to argue that lost tax revenue from cash-in-hand payments is damaging society, and that digital payments would bring such payments back into the tax system. We don't disagree with these points, and many in the UK agree: 36% believe that a cashless society would reduce crime. There are other considerations, though, such as people working legally in the cash economy: some window cleaners and gardeners operate below the tax threshold, and many feel the cost of card terminals is prohibitive. We also believe that crime will always find a way: for example, goods are bartered in prisons instead of cash. There are undoubtedly benefits from the reduction in cash in terms of lower crime and higher tax revenues, but we must not demonise those who operate in cash, when many have no choice. Solutions adopted by other countries, such as Sweden, to bring the grey economy into the formal economy through tax breaks and peer-to-peer payment technology, thereby isolating the black economy to attack it more directly, might be an option for UK policy makers to consider.

If Britain isn't ready to go cashless, then we need to maintain a cash infrastructure for some time to come. That's a challenging prospect. Britain's cash infrastructure costs around £5 billion a year to run, paid for predominantly by the retail banks, and run mostly by commercial operators. Much of this cost is currently fixed, whether in physical cash sorting centres or ATMs. But as cash use declines, the economics of the current cash model are becoming seriously challenged. Much of this dynamic is not seen by consumers, as we are used to getting our cash for free. But ultimately consumers do bear the costs – even if they are currently subsumed into the UK's retail banking model. But just as rising costs have given us smaller chocolate bars instead of higher prices, we're seeing the pressure of these higher unit costs manifesting in the withdrawal of services. Over recent years, many bank branches have closed, and now ATMs are disappearing from areas without enough volume to justify the costs. At the same time, retailers who do pay for cash deposits and access are facing rising costs of handling and banking cash, not just through direct charges but also through the increased travel costs

and security risks when depositing cash, leading to more and more retailers refusing to accept cash.

There are strong parallels in what's happening to cash to other sectors. The shift to online shopping has threatened the high street, with household names closing stores or, worse, going into administration. But just as with the retail sector, bemoaning the situation and demanding that services are maintained even if commercially unviable just won't work. If we want to maintain cash as a viable part of the infrastructure of Britain, we need to think creatively and innovatively.

We need to start considering cash to be a core part of Britain's national infrastructure, and not just as a commercial issue. If cash is reframed in this way, we can envisage more radical solutions to keep cash viable. For consumers, we believe that it is both sensible and commercially viable for the banks and regulators to offer a 'guarantee' of cash access. In part, they can do this by encouraging innovative ways of accessing cash, rather than just protecting increasingly unviable ATMs or, worse, charging consumers for access. To protect cash acceptance, we believe that if we can help the banks keep the costs of cash down as its use declines, and to innovate around cash deposit solutions, then there will be fewer commercial incentives for retailers to stop taking cash. And, underpinning all of this, we believe that a 'utility model' – namely a joined-up wholesale cash infrastructure – could significantly reduce the costs of running the cash infrastructure – making cash commercially viable for the banks to fund on an ongoing basis.

There is no society in the world which has yet gone 'cashless'. But the lessons from those who are closer than us are clear: we need to plan now. In Sweden, we were repeatedly advised by central bankers, consumer groups and the cross-party commission exploring cash to plan now – because once their infrastructure had gone, putting it back was close to impossible. The Swedish government has recently agreed to 'put the brakes on' their shift to cashlessness because they are leaving people behind and need time to plan how to include everyone.

We make five recommendations which will keep cash viable for the foreseeable future, as well as eventually including everyone in a society where digital payments dominate. These recommendations work together, because cash is a system, and needs to be treated as such.

The review's first recommendation is to guarantee consumer access to cash – ensuring that consumers can get cash wherever they live or work. Importantly, this is about access to cash, not just access to ATMs, as we see huge potential for new ways of providing cash access which could both widen access and help

keep the high street alive. This guarantee will now need to be agreed by regulators, in consultation with industry and consumer groups. It may well need legislation in the medium term, but could be set up swiftly, initially on a voluntary basis. The mechanism we propose also gives the right to local communities to 'bid' for increased cash access through their local authorities, which would help address the issue of cash deserts.

Our second recommendation is to take steps to keep cash accepted, whether by a local coffee shop or a large utility provider. Although the arguments for legislation are tempting, we have concluded that they are unlikely to work if they are pushing against commercial incentives. Instead, therefore, we have concluded that the best way to preserve consumers' ability to pay with cash is to make it affordable for retailers, charities and service providers to accept cash, to ask utility and monopoly suppliers to ensure that they will access cash (whether directly or through a partner) as well as to remind suppliers of their wider societal responsibilities to meet the needs of vulnerable customers. We recommend a programme of new work, and targeted technological innovation to take this forward (such as deposit-taking ATMs and 'smart safes'), led by government and regulators.

Our third recommendation is to call for radical change to the wholesale cash infrastructure, moving from a commercial model to more of a 'utility' approach, which will keep cash sustainable for longer. Our cash infrastructure was built for an age of high cash volumes. It is a far higher cost infrastructure than is required today. We recommend that the Bank of England convene a group to redesign this model, making it both more resilient and lower cost. The lower cost of a redesigned cash infrastructure will make it more tenable for the banks to provide free consumer access to cash for longer.

Our fourth recommendation is for government, regulators and the industry to make digital inclusion in payments a priority, ensuring that solutions are designed not just for the 80%, but for 100% of society. We recommend action by government, regulators and industry to work together to solve specific consumer needs, using inclusive design approaches to ensure that the solutions designed really do meet needs. We also recommend that this remains an ongoing priority, and not a one-off activity – and work continues until digital payments really are an option for everyone.

And our fifth and final recommendation is for a clear government policy on cash, supported by a joined-up regulatory approach which treats cash as a system. We are clear that market forces alone won't make any of this happen. This issue needs leadership. Between our financial services regulators we probably have most or all the powers needed to make this happen,

at least in the short term – but no one regulator can do this alone. This is also an ongoing action, as they will need to monitor the cash system over the next decade and refresh their approach as the situation changes. This recommendation is the most urgent, as without this leadership, change is unlikely to happen.

If government, regulators and industry work together, we can keep cash viable so that we don't leave people behind.

But only if we take action now. Cash can no longer just be seen as a commercial issue – it is a matter for public policy. And it will need everyone involved in the system – government, regulators, the Bank of England, retail banks and consumer groups – to work together to take forward our recommendations. But we see merit for everyone in doing so. Unusually, we believe we have developed recommendations in which virtually everyone can win.

It is now critical that action is taken now, so that no-one is left behind.



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We have to be careful that the most disadvantaged people will not be excluded.

Citizens Advice, Bournemouth





01 THE CHANGING USE OF CASH

Cash use is declining

Many are suggesting we're heading towards a cashless society. It's certainly true we're using less cash – over the last ten years cash payments have dropped from 63% of all payments to 34%.²

The key driver behind this has been the growth in debit card payments: now the UK's most frequent payment method. A total of 98% of adults have a debit card, and they're using them more and more. There were 13.2 billion debit card payments in 2017, up 14% from 2016.³

Contactless payments have rocketed, growing 99% in 2017 to 4.3 billion. Over the year, more people were issued contactless cards, more businesses got terminals, and consumers felt more comfortable and familiar with them: by the end of 2017, nearly 119 million contactless cards had been issued.⁴

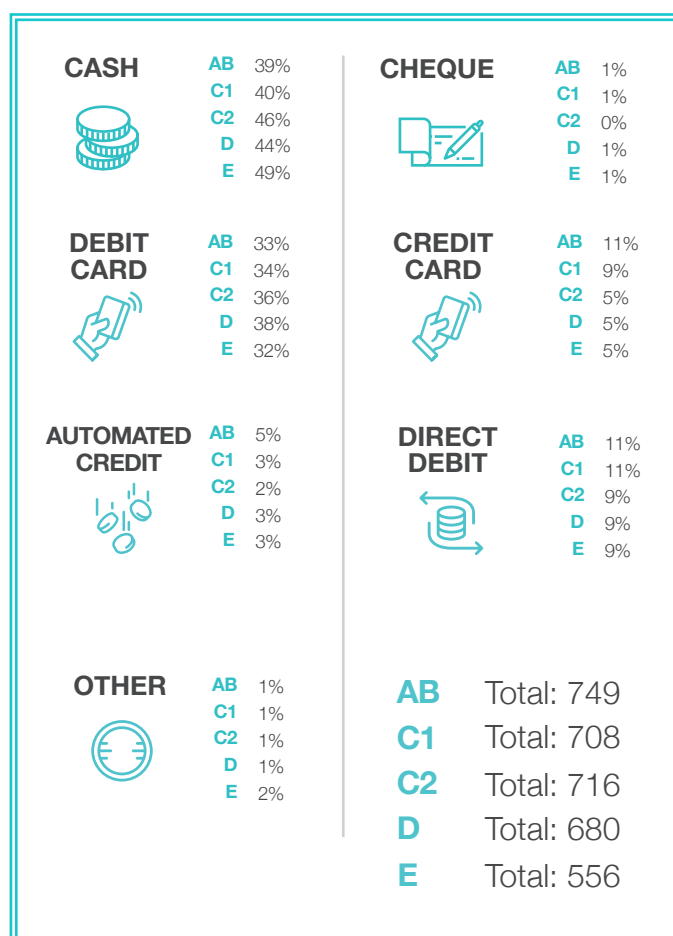
However, there were still 13 billion cash payments in 2017, making up over a third of all payments, and cash stayed (and is forecast to remain) the second most common payment method. Cash is still important as a store of value both in the UK and overseas. The total value of notes in circulation has also increased in recent years, with over 3.6 billion Bank of England notes (worth £69 billion) currently in use.⁵

However, these statistics mask significant differences throughout UK society. While 63% of all adults in the UK made a contactless payment in 2017, those between 25 and 34 were most likely to use contactless, while those over 65 were least likely. There are also some very clear differences in contactless use between the regions: London has the highest use, with almost three quarters of people using contactless, while North West England has the lowest at 52%.⁶

A significant number of people are using cash for all their day-to-day transactions: around 2.2 million. For this group, lower income is a common factor. Over 15% of people with an income under £10,000 a year rely completely on cash, compared to less than 2.5% of all higher income groups.⁷

Percentage of payments made by payment method by people in each socio-economic group 2017

Social Grade	Description
AB	Higher & intermediate managerial, administrative, professional occupations
C1	Supervisory, clerical & junior managerial, administrative, professional occupations
C2	Skilled manual occupations
D/E	Semi and unskilled manual workers, state pensioners, casual or lowest grade workers, unemployed with state benefits only



Source: Access to Cash Survey of 2,000 nationally representative UK consumers conducted in November 2018

2 UK Finance, UK Payment Markets 2018

3 UK Finance, ibid

4 UK Finance, ibid

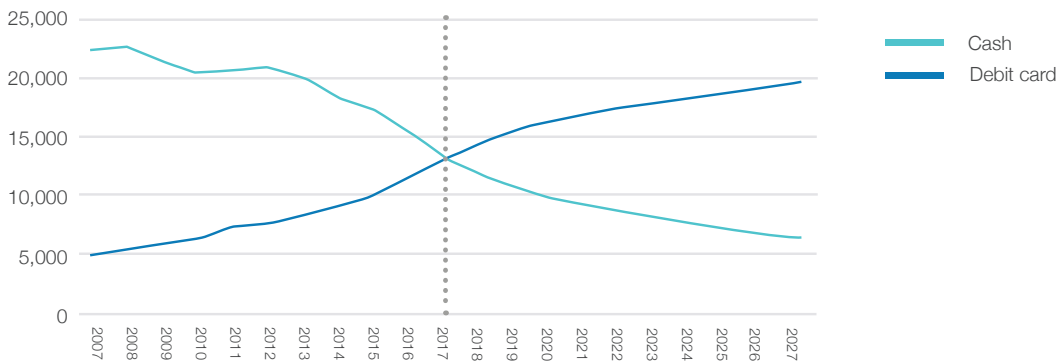
5 Bank of England, <https://www.bankofengland.co.uk/statistics/banknote>

6 UK Finance, UK Payment Markets 2018

7 UK Finance, ibid

Cash is declining as a share of payments

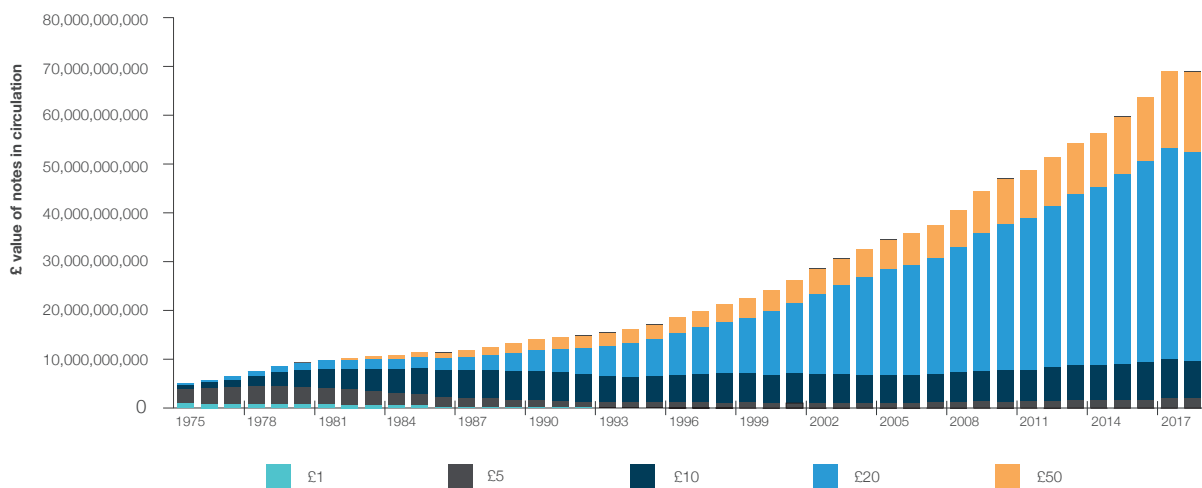
Payment volumes cash vs. debit cards (millions) 2007 to 2017 actuals, 2018 to 2027 forecast



Source: UK Finance, UK Payment Markets 2018

...although the total value of cash in circulation has been rising

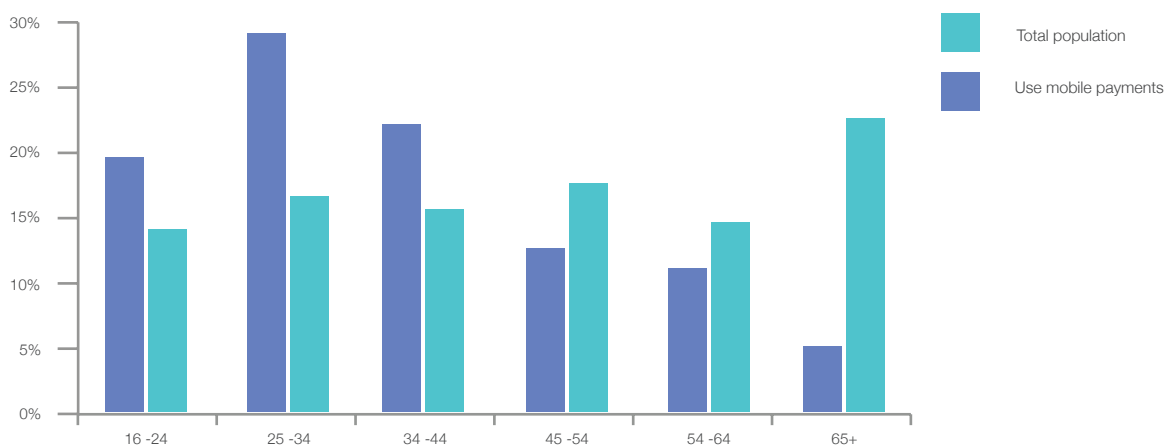
Value of notes (£) in circulation*



Source: The Bank of England

... Unsurprisingly the use of cash alternatives varies substantially across age groups.

Age distribution of mobile payment users vs total population 2017



Source: UK Finance, UK Payment Markets 2018

* Figures include savings and notes overseas

ATM use is also declining

Consumers use ATMs to take out over 90% of their cash, so the recent fall in ATM volumes is a strong indicator that people are relying less on cash.

Statistics from LINK show some clear trends. LINK is the network which connects the UK's cash machines and so enables universal access to people's cash. The number of LINK ATM cash withdrawals for 2018 was down 5% compared to 2017. The total value of cash withdrawn fell slightly less, at 3.5%.⁸

However, LINK's figures also show variations across the country. Some regions, such as London, are showing a decline of 8.5% in the number of withdrawals. Others, such as Northern Ireland, are only showing a 2% decline. Managing this regional variation will be important to help consumers across the UK deal with the shift to digital payments. It's also clear that the rate of decline is accelerating, with Q4 2018 and year to date 2019 week-on-week figures showing significantly larger reductions than the last year's average.

Total LINK ATM transaction volumes (millions) 2016 to 2018



Source: LINK

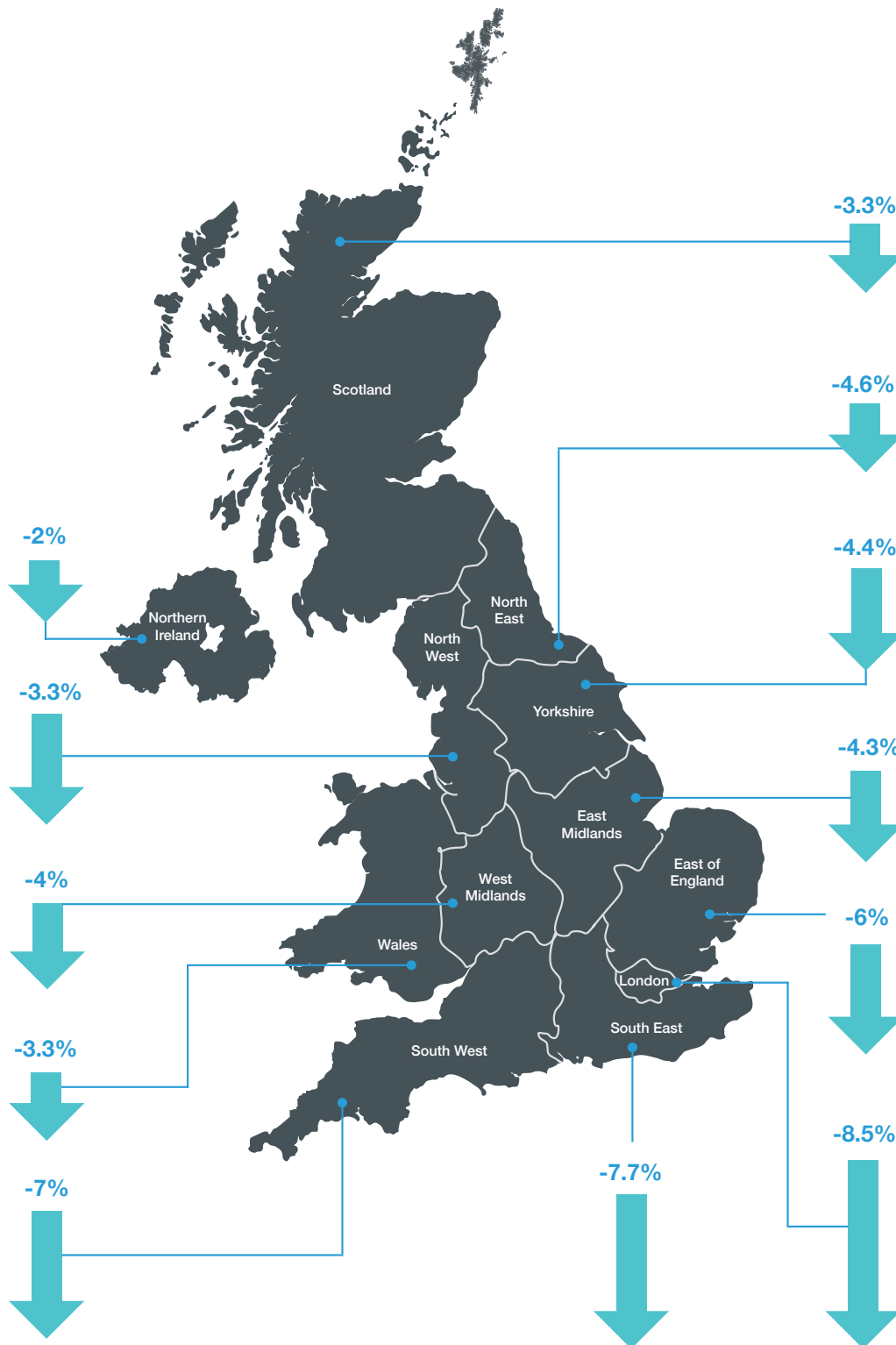


Use of cash machines is dropping fast as consumers switch to digital and yet some consumers will need free access to cash for years to come – the ATM network needs to change to provide this breadth of free access in the face of this change.

LINK ATM Scheme



Percentage reduction in number of withdrawals by region - 2018 vs 2017



Source: LINK ATM Scheme

Cash use will continue to fall

A straight-line projection would see cash use end entirely by 2026 – though this seems unlikely. UK Finance, the industry association for banks and payment providers, predict that cash will fall to 16% of payments by 2027 from 34% today.⁹

Sweden, a country at the forefront of moving to a cashless society, has probably the lowest use of cash in the world at 15%.¹⁰ It's plausible that the UK could be at that level, or even lower, in 10–15 years. However, this would still leave over four billion cash payments a year in 2032,¹¹ suggesting that even in a 'near-cashless' economy, people will want cash and need a cash distribution network.

Contactless cards appear to be the most significant driver of the shift to card payments. The card industry has made a commitment that from January 2020 every card terminal will be able to take contactless payments. This will add even more opportunities for consumers to pay digitally.

However, our consumer and regional workshops showed that for many consumers cash is still very important – because of its physicality and ease of use for budgeting, for example. It's also very popular for small and informal payments, and at this stage the digital alternatives don't meet people's requirements.

Our analysis suggests that cash use could fall to just 10% of all payments in fifteen years' time. This assumes that technology continues to develop at its current rate or faster, that most people who are able to use digital technology increasingly do so, but that we hit a 'floor' because digital payment methods still won't meet everyone's needs.



10 years ago, cash was used for 6 in 10 payments. In 15 years, it could be just 1 in 10.

9 UK Finance, UK Payment Markets 2018

10 Riksbank Payment patterns in Sweden 2018 May 2018

11 UK Finance, *ibid*

Many factors could affect the pace of change

... What will drive cash use down?



Increased acceptability of cards



Shops and others stop accepting cash



Increased use of online shopping



Increased use of cards, mobile apps etc on public transport



Problems and costs of processing and banking cash for retailers, especially as it becomes less common



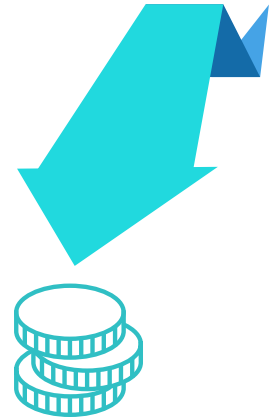
More of UK covered by broadband and mobile connectivity



Accelerated closure of bank branches and ATMs



New innovative services which make digital payments even easier, such as biometrics



... What will drive cash use up?



Consumers lose faith in digital payments because of repeated systems failures



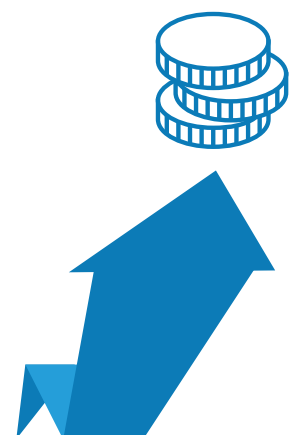
Increased consumer concern over privacy



Significantly negative interest rates



Major economic crisis



02 CHOICE AND NECESSITY



All this digital stuff is brilliant while we have a choice of what we want to use. Whatever happens, we have to make sure that people still have a choice on how they pay and interact.

ADHD Foundation, Manchester



Sometimes I feel better physically paying at a PayPoint for certain bills with cash. I know it's sort of old-fashioned, but I feel in control. I can see the exchange of money for the service.

Consumer, Money and Mental Health
Policy Institute focus group



| Most consumers value having cash

We've all grown up with cash, and for most of us it's synonymous with 'money'. We know that many people feel strongly about cash, and for many of us a cashless society is hard to imagine.

Even among those who regularly use digital payments, most people still carry cash and want the choice to keep doing so. Some say it's because cash is just what we're used to – that if you'd asked people if they wanted to keep the horse and cart before cars were invented, they'd have said 'yes'. There's plenty of science to suggest we don't like giving up something we've already got – particularly if the alternative isn't clear – and that we're predisposed to want choice.

However, it's a mistake to think the need for cash is limited to those who don't want to move with the times.

Our research suggests that, for some, it is the physicality of cash which is important. You can hold it and feel it, count it, and parcel it up into bundles. And when it's gone, it's gone: you can only spend it once. This can also give cash an emotional value that digital doesn't

have, whether it's a bundle of notes in your purse on payday or tucked into a Christmas card. It's something people get passionate about – as we see every time there's a new face on a banknote.

Recent IT failures have led some to question whether digital can replace cash. Cash doesn't need IT to run once it's been issued by a bank and will work even if banks fail. The debate on the cashless society touches on many deep-rooted personal and societal concerns.



97% carry cash on them



85% keep cash in the home



16.5% keep more than £100 in their home



Average cash people carry on them – £41

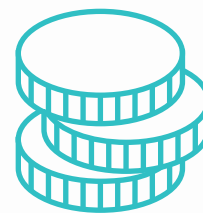


Average cash people have at home – £84

Source: Access to Cash survey of 2,000 nationally representative UK consumers conducted in November 2018

Why people carry cash (97% of the UK population carry cash)

- For **67%**, they like to pay for small things with cash
- For **55%** it provides peace of mind (i.e. in case they can't pay for something with a debit or credit card)
- For **35%** they like to have options / choose how they pay for things
- For **19%** they find it easier to manage their money when they know how much is in their pocket
- For **15%**, they prefer to pay for things with cash
- For **14%**, they believe cash is more convenient when settling debts with friends or family



Why people keep cash in their home (85% of the UK population keep cash in their home)

- For **43%**, it provides peace of mind
- For **39%**, sometimes they need cash (i.e. paying tradesmen, window cleaner or gardener)
- For **27%**, they like to have a choice over how they pay for things
- For **21%**, they feel it's good to have some cash in case the IT systems go down
- For **16%**, cash is more convenient when settling debts with friends or family
- For **12%**, it helps them keep on top of their budget
- For **2%**, they don't trust the bank or building society with their savings



The UK population use cash because

- 34% like to have a choice when paying for things
- 20% feel more in control of their money when they use cash
- 16% find it easier to manage their household budget using cash
- 6% want to protect their privacy (i.e. don't leave an online record of my spending)
- 5% don't trust the Internet with their money
- 3% state they don't trust banks to control the way they pay
- 3% like to keep their guilty pleasures hidden from their partner



What do we use cash for?

The Access to Cash survey of 2,000 nationally representative UK consumers found that 97% of the UK population carry cash on them. What are they using it for?

Perhaps unsurprisingly, cash use varies hugely by type of transaction. We still rely heavily on cash for gifts and donations, partly because the recipients often only take cash, and partly because of the tangible nature of cash as a gift. But for many larger purchases such as household bills, buying a car or booking a holiday, we increasingly use digital payments.



What do we use cash for?

Percentage of the UK population paying in cash



FOOD SHOPPING

Weekly grocery shopping – **30%**
Day-to-day grocery shopping (bread, milk) – **54%**
A sandwich at lunchtime – **71%**



LEISURE/SHOPPING

Cinema tickets – **39%** Large presents – **14%**
A holiday – **9%** Small presents and
Clothes – **33%** birthday cards – **67%**



MEDIA

Music and videos – **23%** Newspaper – **86%**



GIFTS AND DONATIONS

Paying pocket money – **87%** Giving money to a
Charity donations – **74%** homeless person or
street busker – **94%**



TRANSPORT

Train ticket – **33%** Car – **18%**
Bus ticket – **76%** Petrol station – **27%**
Taxi fare – **85%**



HOUSEHOLD

Rent – **13%**
Gas, electricity, water bills – **10%**
TV licence – **8%**



TRADESPeOPLE

Gardener – **81%** Cleaner – **76%**
Window cleaner – **85%**

For many, using cash isn't a choice: it's a necessity

For 25 million people in Britain, or 47% of the population, living in a cashless society would present real challenges. Going completely cashless simply isn't an option yet.

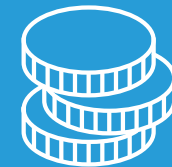
Our infrastructure is a significant barrier. Those living in remote or rural areas can find digital access difficult through a lack of broadband or reliable 4G mobile data coverage. Of the 5.3m¹² adults who never use the internet, 3.7m (70%) live in rural areas. For similar reasons, many can't rely on cards and digital as their only way to pay. While card acceptance is growing, many merchants and retailers are still cash only, especially in remote and rural areas.

Cash also helps plan budgeting. Many debt charities advise people to cut up cards, and only use cash: if you only have £50 in cash, that's all you can spend. For those with a carer who shops for them, cash helps track what they've spent. And for some with physical or cognitive disabilities, handling cash is easier than remembering a PIN or reading a screen.

Consumers with mental health issues may distrust digital and cards in favour of cash: it gives them control over their saving and spending, where digital payments and online banking can make it hard to control compulsive behaviours like problem gambling.

Those who can't provide proof of their identity to a bank or financial services provider have few choices other than cash. Approximately 1.3m¹³ UK adults don't have a bank account, including people new to the UK, those moving out of extreme poverty or homelessness, and those with various other reasons.

The biggest indicator of cash dependence, though, is income. The poorer you are, the less likely you are to have access to the digital infrastructure, and the more likely you are to be at risk of accidentally going overdrawn.



2.2m

only use cash (UK Finance)



1.3m

are unbanked (FCA)

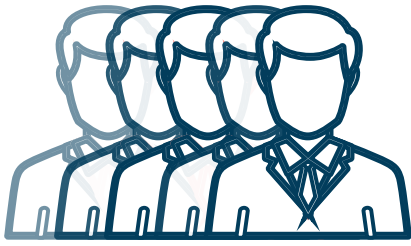


4.1m

UK adults in financial
difficulty (FCA)

¹² FCA, The financial lives of consumers across the UK – Survey 2017

¹³ FCA, *ibid*



47%

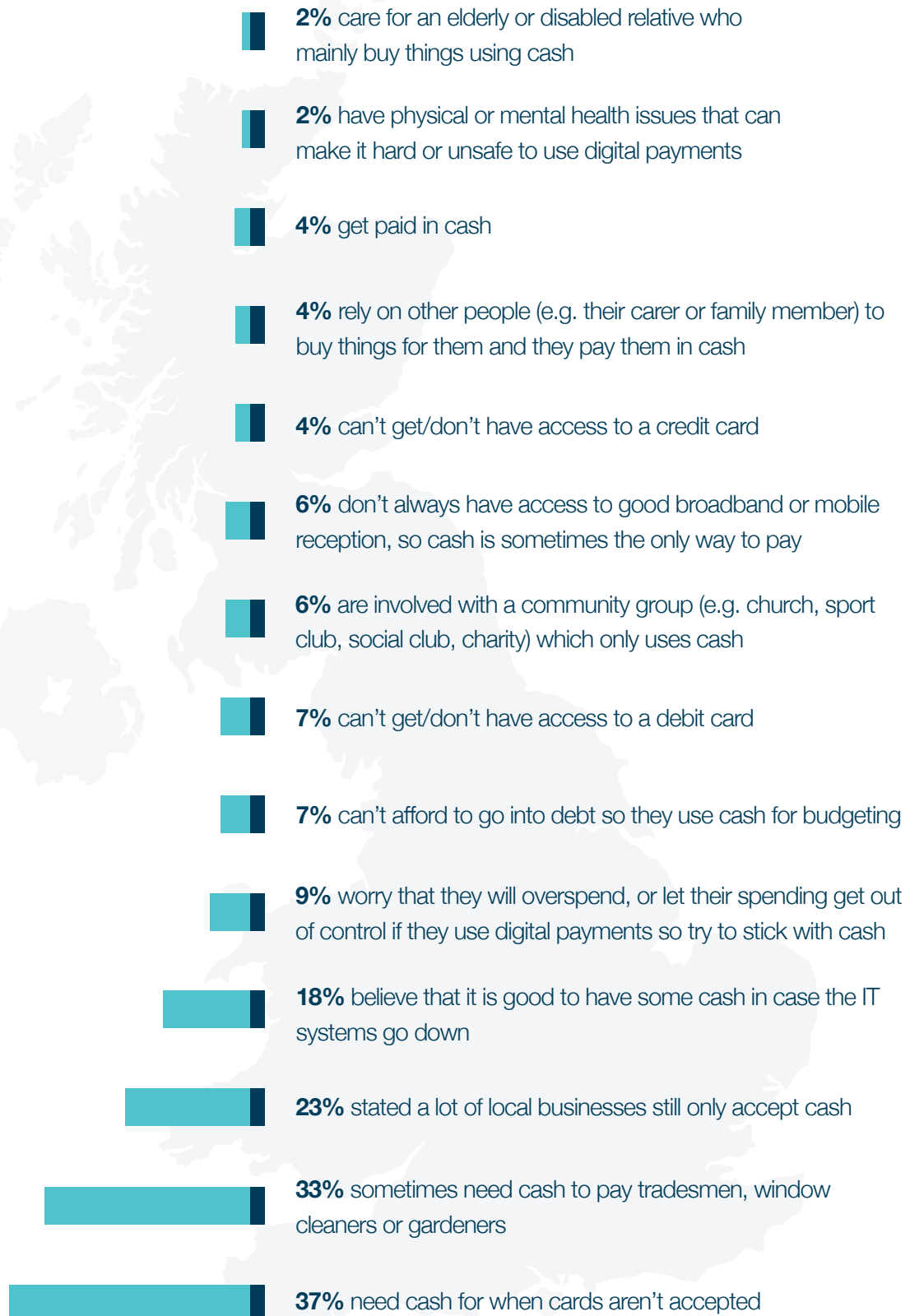
OF THE UK POPULATION BELIEVE IT WOULD BE PERSONALLY PROBLEMATIC IF THERE WAS NO CASH IN SOCIETY. 17% ARE EITHER UNSURE OF HOW THEY WOULD COPE, OR WOULD NOT COPE AT ALL.

Source: Access to Cash survey of 2,000 nationally representative UK consumers conducted in November 2018



Why do some people need cash?

17% of the UK population are unsure of how they would cope, or would not cope at all in a cashless society. The reasons why are varied.



Source: Access to Cash survey of 2,000 nationally representative UK consumers conducted in November 2018
All percentages represent proportion of the UK population



Cash is a great way to limit your risk. Older people often rely on others to help with shopping, and accept that there is a risk of being short-changed. But if they only give a carer or neighbour a £20 note, then they limit their risk substantially, and it's easy to see the change so that if there is a problem, you can raise it on the spot.

Age UK



The benefits of digital payments

While some people use cash as a choice, and others as a necessity, more and more of us are cutting our cash use.

For most of us this is down to speed and convenience. Cash can be fast, but a contactless tap is faster and doesn't leave you with a handful of change. For cashiers, baristas and anyone working behind a bar, cards are quicker and easier: no grubby notes and no change to count.

There are other tangible advantages to going digital. Every transaction is recorded on your bank statement – which means you can quickly find a missing £10 by checking your balance in online banking or your bank's mobile app.

Using digital and card payments can also offer more control. If you spot a deal or a bargain, you don't need to count the cash in your pocket or find an ATM.

Security is also an issue. Stolen cash is gone forever, but if you suffer card fraud you'll usually get your money back. Banks can trace transactions if there's a dispute, and credit cards offer Section 75 cover for purchases over £100.*

Several charities agreed that digital payments can help prevent abuse and exploitation. Migrants, especially female migrants, were reported to be at greater risk of being abused and controlled if they're paid in cash. One charity which trains people to spot financial abuse told us they've seen many older people and people with dementia suffer when carers or family members take their cash.

People also told us how important cards are to their credit rating. Even if people are budgeting well with cash, it doesn't leave a digital footprint to help get a credit score before applying for a loan or mortgage.

Lastly, the perceived role of cash in enabling tax avoidance is important to some. The question of whether it's morally right to pay in cash was raised by no lesser authority than the Exchequer Secretary – though others were less convinced.



*Using cash won't improve
your credit rating.*



StepChange, London

* Under Section 75 of the Consumer Credit Act 1974 your card provider will give you a refund for purchases between £100 and £30,000 if your items are not delivered, you buy something that is faulty or damaged and cannot get a refund or replacement, or a company goes into administration before they have given you what you paid for.

Digital charity donations

The trend towards carrying less cash is a challenge for charities, street performers and the like who have traditionally relied on cash donations. Our research shows a mixed picture. Some tell us it's a problem, while others – especially those taking digital donations – see it as an opportunity to solicit donations beyond people's pocket change. Reports of church or mosque donations by card are now common, and they're often well received. After a trial period swapping the collection plate for a card-reader, the Reverend Jim Trood of St Matthews Church in Walsall said, 'One of the older members at our church said he thought it was great, commenting it was so much easier than having to find the right money to put on the collection plate.'



In October, we spoke to Jenny Lindroth from SituationStklm, a Swedish magazine similar to the UK's 'Big Issue', sold by homeless people in Stockholm. Sweden has very low cash usage and sellers couldn't sell magazines to people who didn't carry cash. The solution? A badge for sellers with a QR payment code. Buyers scan it with their phone, make a digital payment using the mobile payment system Swish, and then the seller collects their cash from the SituationStklm offices soon after. This solution originated to help sell magazines, but soon showed other benefits. It helped homeless people carry less cash – which reduced their vulnerability to theft, and also gave them a way to budget by leaving their money at the office until they needed it.

In December 2018, it was announced that the UK's Big Issue was starting a similar eight-week trial.¹⁴ Sellers are being issued with card readers in London, Bath, Birmingham, Bristol and Nottingham. Russell Blackman, managing director of the Big Issue, said, 'Obviously, we're moving swiftly towards a cashless society. In the last few years, Big Issue sellers have been proactive and they've gone off and purchased their own payment devices, but we hope this pilot is the starting point that will provide more vendors with an income in the changing landscape.'



Consumers are strongly embracing data-free digital giving. Pennies has seen over 50% higher donation levels than this time last year, and this momentum has enabled over 60 million micro-donations, and counting, in total, as fewer of us use or carry cash but we still want to give a little back.



Pennies, Charity

Consumers believe that digital provides an attractive way of making payment because:

72%

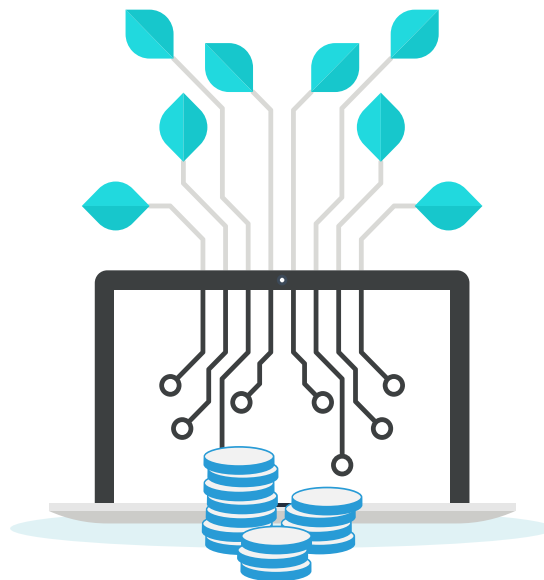
You can get up-to-date information on how much is in your account and how much you have spent.

65%

It makes you feel safer not having to carry large amounts of cash.

73%

It's quicker and more convenient.



69%

You get more choice by shopping online.



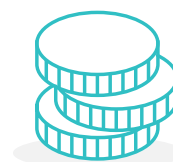
62%

You get the best deals and more discounts by shopping online.



68%

You get the best deals and more discounts by shopping online.



70%

You don't have all that cash filling your pockets.



Countless factors are likely to play a role in the way in the way people use digital payment methods, such as blockchain technology, tokenisation, the increasing development of the sharing economy, AI / personal virtual assistants, personalisation, new interfaces and the connected home.

Barclays Bank, Call for Evidence response



NCR believe that cashless payment alternatives will grow, through mobile, card and wearable technologies. However, these are likely to coexist with physical cash.

NCR, Call for Evidence response

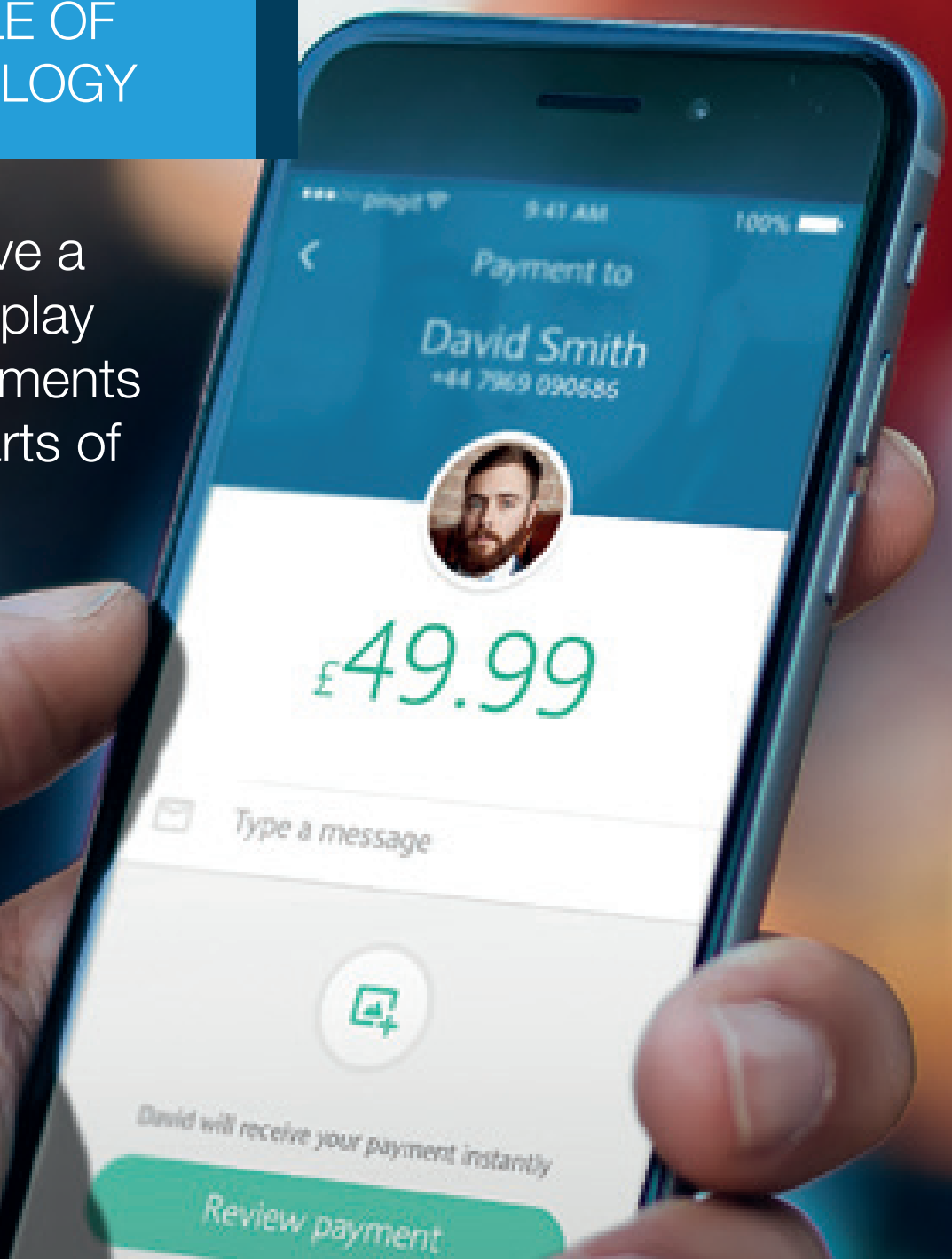


Digital innovation over the last few decades has changed the way societies operate. In payments, we have seen an upsurge of new ways to pay that go far beyond the card and make digital payments even more accessible to consumers globally. Increasingly, non-traditional players are injecting new ideas and technologies into the traditional payments ecosystem, further expanding the reach of digital payments around the world.

VISA Europe, Call for Evidence response



Innovators have a crucial role to play in making payments work for all parts of society.



Changes in technology can be small and subtle in the short term, but profoundly change society over the medium to long term. It's already happened with smartphones, social media, instant messaging, online shopping, and digital streaming.

Mobile payments without cards have been around for some time, using services like Apple Pay and Google Pay to enable phone and smartwatch payment. Over the next decade they're forecast to grow by 56% to 877 million.¹⁵

Most commentators believe that the pace of technological innovation and associated societal change is increasing. For

many in the UK, visiting a bank branch, receiving a paper statement or writing a cheque feels archaic, and 41% believe that they will see a cashless society in their lifetime.¹⁶ And 3.5 million people in the UK only use cash once a month. For some, especially the young, a cashless future seems logical, and indeed attractive.

Technological innovation



Contactless cards: Free, simple, easy to use, and widely accepted. Consumers don't need any gadgets: they use cards which are reliable, small, easy-to-carry, and already in their wallets and purses.



Mobile payments: Users store their card details on a device, normally phones and smartwatches, and sometimes even rings and jewellery. They can then use it to buy goods or travel on buses or the Underground using services like Apple Pay and Google Pay. This category now accounts for more payments than either standing orders or cheques, with 561 million payments in 2017. Over the next decade they're forecast to grow by 56% to 877 million.



Peer-to-Peer: In the UK, peer-to-peer micropayments haven't made much headway. In other countries, though, they've had a huge effect, letting people make small payments as easily as texting. Swish is Sweden's ubiquitous solution, Tencent's WeChat Pay is widely used in China, and PayPal's Venmo is a US solution.



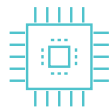
Invisible payments: Cars can hold payment details to automatically pay tolls when entering cities or using toll roads. It's rare in the UK, but common in many countries. If you have Alexa, Siri or Google Assistant in your home, you can instruct them to buy things for you without getting a card out of your wallet. Soon, smart fridges promise to order groceries for us when we run out of key ingredients.



Biometrics: Many of us use thumb and fingerprints to unlock mobile phones, and we expect to have them scanned at airports. It's a short step to using them to pay in shops and bars, and there have already been trials. In China, Alipay have developed biometrics as a payment tool to overcome literacy issues: everyone's smile is unique, so people can pay for goods by smiling at a camera.



Cheap and simple card acceptance devices: iZettle, Square and other similar devices have hugely expanded the number of people who can accept card payments: from market stalls and home-working hairdressers to builders and decorators. These small, cheap, wireless card payment terminals let merchants take card payments, and cost as little as £30.



Chips inserted under your skin: It sounds like science-fiction, but around 4,000 people in Sweden have had tiny microchips inserted under their skin. They're most often used for access to buildings, but they can also make payments, including for train journeys.

In almost every case, the drive towards digital payments has been centred on making the customer's experience easier, faster and more frictionless. This isn't exclusive to payment technology: it's the key to all technology adoption, and some people will pay more for a fast and convenient service.

This wave of innovation is set to continue with the rise of 'FinTech': financial technology. It's seeing huge investments in new technology and the associated new business models. Investment in the UK FinTech sector rose to a record \$3.3 billion in 2018, up 18% year-on-year.¹⁷ The UK has become renowned as the FinTech capital of the world and – along with Australia, Canada and South Korea – is leading global contactless adoption. The UK is much further along the path from cash to digital than most other countries.

As other technology develops, payments are likely to be integrated. When self-driving cars hit our streets, they'll automatically pay for parking and tolls. In our connected homes, the 'internet of things' could see a return to a leasing model where our washing machines and printers bill us depending on how much we use them. It might sound fanciful, but it's already happening in some parts of the world.

Digital has significant power to support inclusion



Budgeting and flexible payment tools: People like the physicality of cash for how it helps them manage money. You can see how much you have, can't spend what you don't have, and won't incur unexpected fees or charges. Tools and apps like those from Monzo and Money Dashboard can mimic these features, for example by letting users subdivide account balances into different 'jam jars'. New payment innovations like 'request to pay' can let consumers control how much leaves their account and when.



Open banking: This regulation should also help improve budgeting tools by letting third parties access bank-held data and use it to help consumers to understand their finances. Open Banking will also help develop more tailored solutions for specific customer segments, rather than the current one-size-fits-all approach. For example, Starling Bank is aiming to 'provide the hub for your financial life, bringing together information from all your financial services in one place'. Nationwide Building Society¹⁸ has recognised the potential with their 'Open Banking for Good' challenge, to encourage innovations to help a wider proportion of society.



Smart account management: Some of the new banks such as Monzo¹⁹ and Starling²⁰ are pioneering the development of 'gambling blockers'. More recently, Barclays has adopted a 'payment blocking' system to help people control their spending. Turn the feature on and they'll decline attempted payments to gambling sites. Try to turn it off again and you'll get a warning and a link to a gambling helpline.



Biometrics: In China, biometrics identification means you don't need to be able to read or remember your PIN: you can record your smile, your fingerprint, even your iris.



Real-time balances: Our research showed people on low incomes and managing tight budgets worry that their bank account balance doesn't include pending payments like Direct Debits and standing orders. This makes it harder to manage money, and stops some people using accounts as they try to avoid bank and overdraft charges. Solving this would be a big help to people moving off cash.



Artificial intelligence: We're used to the bank calling us up to ask us about payments if there's a suspected fraudulent transaction. Artificial intelligence could do the same to monitor unusual spending patterns, which could warn of a mental health crisis, or the early onset of dementia. This might give sufferers or carers more confidence in digital solutions, knowing that issues would be spotted earlier.

FinTech is a fast-moving sector. Thousands of innovators in the UK and internationally are developing services which could help with financial inclusion, creating digital tools to meet people's needs.

However, one significant challenge is that these commercial developments often target early adopters and larger market sectors. People relying on cash may be late adopters, have the least money to invest in new solutions, and make up smaller, harder-to-reach segments of society. Some of the solutions may already be out there, but people simply don't know they exist. The industry will need a concerted effort – with regulatory support – to make sure that digital payment developments meet the needs of those who currently rely on cash.

18 <https://www.nationwide.co.uk/about/media-centre-and-specialist-areas/media-centre/press-releases/archive/2018/7/11-open-banking>

19 <https://monzo.com/blog/2018/06/19/gambling-block-self-exclusion>

20 <https://www.starlingbank.com/blog/merchant-blocking-gambling-betting>



Biometrics have the potential to revolutionise how we interact with technology

For years you've been able to use biometrics like a fingerprint or smile to validate your identity. The technology isn't widespread in the UK yet though, partly because of consumer concerns over privacy and unreliable implementation. Instead the UK has relied on the PIN – an authentication method that's simple, proven and ubiquitous. We anticipate more people relying on biometrics, not least as people get used to using fingerprints and even face scans to unlock their phone.

In countries with lower literacy levels or less reliable identification systems, biometrics are being used more and more as the primary way of validating identify for transactions. India's national ID programme Aadhaar is the largest biometric database in the world.²¹ It stores a biometrics-based digital identity, which is assigned to people for their lifetime, and can be checked online instantly in the public domain, at any time, from anywhere, and without paper.

Aadhaar is designed to enable government agencies to deliver retail public services. It stores biometric data (fingerprints, iris scans and face photos), along with demographic data (name, age, gender, address, parent and spouse names, and mobile phone number). Originally voluntary, it has become mandatory for filing tax returns, opening bank accounts, securing loans, buying and selling property, receiving a salary and even making purchases over 50,000 rupees (£610).

In China, payments using biometrics are also on the rise. On Alibaba's Singles' Day on November 11 2018, the world's largest shopping event attracted \$30.8 billion in total transactions. This year, 60% of customers paid either by scanning their fingerprint or taking a selfie. Alipay users can also use the 'Smile to Pay' app: in a few seconds it can recognise and identify a face, then verify payment through a mobile phone. It's seeing widespread adoption: it has now been rolled out to 300 KFC restaurants stores across China.²²

In South Africa, First National Bank has developed a biometric ATM that lets users open an account with a fingerprint scan.²³ Called TouchPoint, it matches users' fingerprint data against records held with South Africa's Department of Home Affairs to stop fraudulent accounts being created. As well as making it easier to create accounts, people can also use the ATM to buy mobile airtime and electricity and, of course, withdraw cash.

We'll see more and more developments like this. However, they need to account for privacy issues and users' concerns that biometric data is only used for purposes they agree to.

21 <https://www.bbc.co.uk/news/world-asia-india-41033954>

22 <https://www.biometricupdate.com/201811/smile-to-pay-facial-recognition-system-now-at-300-locations-in-china>

23 <https://findbiometrics.com/south-african-bank-biometric-atm-505075/>



98% of farmers own a phone, 61% a smartphone but only 40% have signal on their farms and only 30% have a good broadband speed.

National Farmers' Union, Gwynedd



Addressing poor connectivity is critical to supporting digital payments

Digital payment systems depend entirely on good connectivity. No connection, no payment. But despite technology's progress, there are still substantial black spots in the UK: places without fixed broadband (either through fibre-optic or the landline telephone network) or mobile data signals. In these areas, digital payments simply aren't possible.

In black spots, people can't use the internet from home or from mobile devices. This means no digital payments, no online shopping, and – increasingly – no way to use local and national government services. This isn't just a consumer issue: businesses need good access to digital networks to operate. From tech startups to rural B&Bs, if businesses can't accept authenticated card payments they're at an immediate disadvantage.

In comparison, cash always works and doesn't rely on devices, connectivity, infrastructure or even power. In many areas and for many people, it's still the only practical payment method.

The UK's broadband market has evolved rapidly. In 2004, only around half of UK households had internet connections: the majority of these were

narrowband connections, and mobile broadband was just emerging. By 2007 that had increased to 64%, and by 2018 it was 87%, according to Ofcom data.²⁴ However, many consumers still receive a poor fixed broadband experience, with significant differences between urban and rural areas. Ofcom define a decent download speed as 10 Mbps – and in May 2018, about 3% of premises (around 865,000) couldn't achieve this. While 99% of urban premises can get this performance, only 85% of rural premises can.

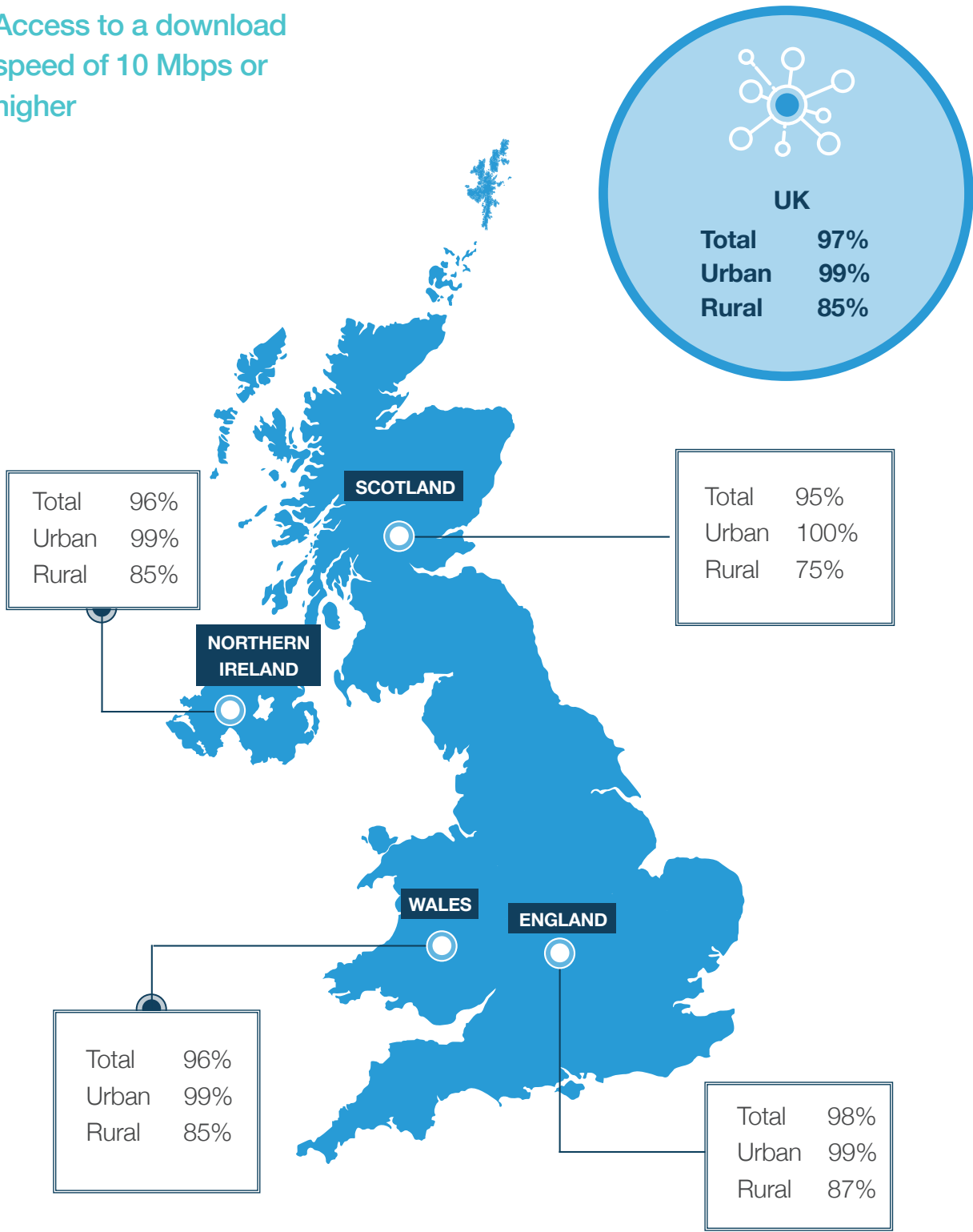


There is a major delay in rollouts between cities and rural communities. You've got a 10-year delay at the very least. The infrastructure costs to get upgraded are very high and the return is very little. You are always struggling with connecting the last 5%.

Barmouth Publicity Association, Porthmadog



Access to a download speed of 10 Mbps or higher





People need to use digital banking but don't always have ways of accessing the internet in private. Many have to use the local library, which isn't designed for privacy.

The Salvation Army, Shetland

Coverage is 84% in my constituency (Dwyfor Meirionnydd) and it is near impossible to reach the final 16%.

Liz Saville Roberts MP, Dwyfor Meirionnydd

There are certain shops where the building materials sometimes don't allow the signal in. Even in the middle of the city! Also, if too many people in one place use it, it doesn't work properly.

ADHD Foundation, Manchester

Bank branches and good broadband are like roads and streetlights. There is a big divide in the haves and have nots. The connectivity divide will be a lot bigger than the North/South divide.

Southwark Chamber of Commerce, London



In March 2018, the UK Government introduced the Universal Service Obligation (USO) to ensure people in the UK have the right to request a decent broadband connection. Under this legislation, homes and businesses will be able to request a connection costing up to £3,400 to give them an acceptable connection speed (10 Mbps down, 1 Mbps up). Ofcom are responsible for putting the USO into place and appointing the service providers to offer it. This is expected to take up to two years.

However, this is a right to request, rather than receive, and it's still subject to the cost cap. Ofcom estimates that by the end of 2020 only 59,000 premises (0.2%) will be left unserved by the USO. As long as consumers use the service and it's implemented as planned, very few locations will be left without decent broadband.

Businesses are facing rising costs for cash

For the self-employed or small businesses, moving away from cash can be a mixed blessing. Some see cash as quicker and cheaper, saving costs on equipment and card payment charges. Others find it costly and time-consuming to bank cash.

The Federation of Small Businesses reported that businesses were finding it more expensive to handle cash. They told us that issues include rising bank costs and branch closures, meaning it takes longer to travel to a branch to pay in cash. More and more businesses told us they use the Post Office for deposits; even the smallest Post Office branch can take deposits up to £1,000, with many branches accepting up to £20,000. Still, many also reported problems with queues and service levels – both issues the Post Office is seeking to address with new deposit technology.

Others, such as the self-employed and those offering mobile services, told us they found the move to digital payments extremely useful. Small card terminals like iZettle let them accept cards, which makes it easier to up-sell additional products and services. They can also take electronic payments for services in advance, which reduces the cost of 'no-shows'.

Cash businesses find it hard to avoid the risks of having cash on the premises, and they incur security costs to secure and manage cash, and move it to the bank or Post Office. Several cashless shops and cafes cited security as one of the reasons they stopped accepting cash. Some are also reluctant to have ATMs on their premises because of potential ram raids or robberies.



76% of convenience store customers pay by cash



The average spend of convenience store customers is **£6.50**



80% of convenience stores accept contactless payments



94% of convenience stores accept debit cards



Cash has always been a pain. You've got problems with theft. The banks charge a fortune for you to pay cash in, and they take a cut of everything you pay in. You have to organise change, go into town, park, queue up – which is another security risk – or pay a firm like Securicor to pick it up.

Mike Keen, Landlord, The Boot (UK's first cashless pub)



Tackling crime and tax evasion through technology

Throughout our review, people have raised concerns that cash supports both the informal (grey) economy and the illegal (black) economy. Many express the view that moving away from cash would help reduce both economies, decrease crime and increase tax yield.

No one knows the true size of the grey and black economies, but estimates suggest that it could be as high as 11% of GDP or £223bn.²⁵ Pushing the cashless society as a proactive way to reduce crime and tax evasion is a hotly debated subject. On one hand, the anonymity of cash makes it hard to trace, so makes it a good choice for criminal activity. On the other hand, many point out that crime will always find a way, and that if cash is withdrawn, criminals will find other ways to pay for goods.

As far as the grey economy is concerned, it isn't illegal to pay in cash as long as people pay tax when it's due – though cash-in-hand can be used for tax avoidance. In our research, we've found one powerful example from Sweden of how the grey economy was reduced. It didn't happen through withdrawal of cash, but by giving the public tax incentives to pay for informal services like cleaning and gardening through their bank accounts.

Many also want the privacy or anonymity of cash, even when their activities are lawful. This can include hiding spending from partners, parents or children – for good or ill. Many suggested that if cash didn't exist to facilitate anonymity, people would find other ways – including cryptocurrency, secret bank accounts and bartering.

In March 2018 the Treasury published a call for evidence: 'Cash and digital payments in the new economy'. This noted that most traders and businesses taking cash payments do so honestly. But in some cases, the anonymity of cash and its inability to be traced are perceived as facilitating tax evasion, hidden economy activity and money laundering.

This is consistent with HMRC's operational experience. This shows that cash can be a problem for tax compliance because taxpayers find it hard to keep accurate records of all their transactions. In other cases, cash is used by a small minority to hide or disguise their taxable income by not reporting, or under-reporting, what they owe.

In October 2017, the government published its National Risk Assessment (NRA) to set out the key money laundering and terrorist financing risks for the UK. It said that cash-based money laundering continues to pose a high risk to the economy. According to the assessment there has been an increase in the movement of illicit cash outside the banking system, including through cash smugglers. The previous NRA from 2015 also highlighted that cash-intensive businesses – such as scrap metal wholesalers, nail bars, takeaways, and storage warehouses – represented particularly attractive opportunities for criminals.

The Treasury also noted that cash's anonymity makes it well suited to money laundering and supporting criminal activity, so more digital payments and less cash use could potentially increase tax compliance, reduce money laundering and reduce the support of criminal activity. However, the Treasury thought the impact of this change may be limited if the dishonest minority keep using cash to hide or suppress their income.



Some people just don't want to leave a footprint... so they make transactions in cash. It's a choice they want to make. Maybe it's empowerment? A right?

CEO, Big Issue Foundation





Cleaners and carers may also often require payment in cash, not as a tax avoidance measure, but because they don't have the resources to use card machines to take payment and, in some cases, may themselves be unbanked.

The Finance Foundation

*There are clear benefits to being cashless, but I worry it would be harder for people who help me to step in and take better control of my finances...
[if I became acutely unwell].*

Consumer, Money and Mental Health Policy Institute focus group

*Getting a discount with your plumber by paying cash in hand is something that is a big cost to the Revenue (HMRC) and means others have to pay more in tax. I think it is morally wrong.*²⁶

David Gauke, Exchequer Secretary to the Treasury, 2012



POLICE LINE

For digital payments, - across the UK population:

59%

believe all payments would be traceable, reducing fraud.

43%

believe it would reduce the size of the black economy and make it easier to collect taxes.

36%

believe there would be less crime because people wouldn't be able to steal your money.



Cashless Parking by Mobile Phone

- No need to search for coins
- No need to predict the required parking time
- Only pay for the time that you are parked
- Instant usage

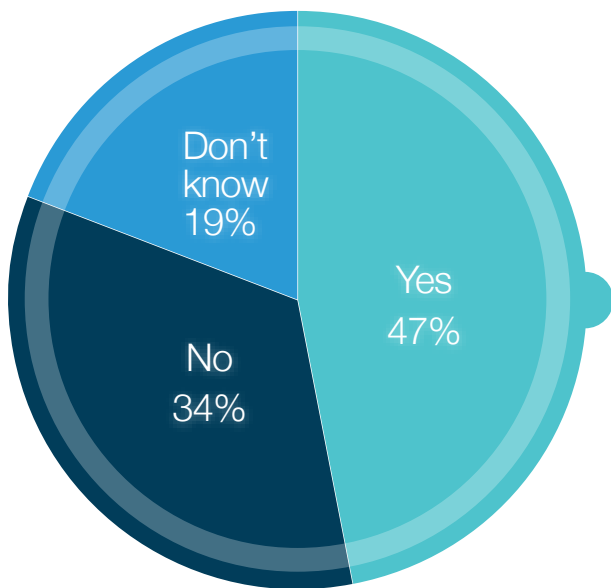
People will be left behind

Cash is an economic necessity for approximately 25 million people, or 47% of the population. And a significant proportion are unclear about how they would cope with a cashless society.

Our research has explored the implications in detail. We've conducted discussions with over 120 organisations, and surveyed thousands of consumers. We've identified a wide range of risks arising from the transition to a cashless society, ranging from risks to the viability of rural communities through to risks of catastrophic failure if digital fails and we have no fall-back in cash.

While many are comfortable with the idea of a cashless future, there's widespread concern about people being left behind, especially the most vulnerable. That risk is real – if we go cashless too quickly, and without enough planning and thought, people will be left behind.

Would it be problematic for you if there was no cash in society as we know it today?



14%

I wouldn't cope at all. Cash is essential to how I live my life.

22%

I don't know how I would cope. Cash is very important to how I live my life.

50%

I would cope. But losing cash would be a major inconvenience to how I live my life.

14%

I would cope. Losing cash would be a minor inconvenience to how I live my life.

Public concerns of a cashless society

What implications do the UK population believe cashless society would have?

65%

of people with mental health issues might find it harder to manage their money.

67%

of people on low incomes might struggle to balance their household budget.

63%

of people would lose the value of money: they say holding cash in your hands makes you think more about how you spend it.

56%

of rural communities would become less viable.

74%

say we would all be more vulnerable to cyber-attacks.

51%

of people would become less social (i.e. physical cash brings people together).

69%

say it would be difficult to pay for certain things, like tradesmen and window cleaners.

60%

say we would all have less privacy.

DONATE

74% say charities and the homeless would suffer as they wouldn't benefit from people having small change.

70%

say people wouldn't have the peace of mind of having spare cash in their pocket.

75%

say some older people would find it difficult to do everyday things like pay bills.

72%

say vulnerable groups of people would be more likely to get scammed or defrauded.

74%

say it would take away people's right to choose.

79%

say people who don't have access to good internet connections would lose out.





Risk to rural communities



Rural communities are among the slowest to move to digital, often due to limited access to broadband. They also have a larger proportion of lower income, older and more vulnerable users, who still prefer or need to use cash. As cash usage falls, the facilities which support it – Post Offices, bank branches and ATMs – are disappearing as they become commercially unviable. The earliest closures of ATMs and branches have been in remote and rural areas because activity levels and volumes tend to be lower than in busy urban areas.

This makes it harder for locals to access cash, and also increases the costs for local retailers using cash – which pushes them to digital only. This risks leaving pockets of consumers unable to access local services, and increased pressure on the margins of local merchants and retailers who choose to accept cash.

“When banks close, they are closing two or three branches at a time. Since 2015 we have been campaigning to get more cash-points as the number of ATMs is important. If you only have one and you run out of money, they then have nothing for days and for miles.”

Liz Saville Roberts, MP



Risk to personal independence



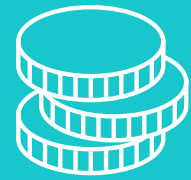
Many older people and those with disabilities manage their affairs by spending in cash. Moving to digital payments can mean handing over control to someone else, particularly if the person struggles with technology. Many also fear that with banking, shopping and payments done online, there's less need for face-to-face transactions and human interaction, both of which contribute to the safety and support a local community can give to the vulnerable.

“Our research shows that there are more people who are not able to go to cash machines through physical reasons or because they are scared of using ATMs in public, and having access to cash to go about their daily life is what stops them from going into care sooner.”

The Finance Foundation



Risk of increased debt



Many people use cash as a way of managing their budgets and avoiding debt. Abstract cash management using a computer or phone screen, or even a paper statement, can be difficult. Many prefer the physical nature of cash because they can easily track and count it. It can be harder to track spending when it's all on cards and Direct Debit.

Direct Debits also cause problems as they can leave accounts earlier than expected during weekends or bank holidays, and the lack of real-time account balances can cause problems as transactions take time to clear or become available. For gig economy workers, or those paid irregularly, paying bills in cash means you have less chance of going into debt.

“A general point: cash is a certain thing, whereas electronic payments are uncertain and that’s about credit. At least you know what you’ve got with cash.”

Association of British Credit Unions, Manchester

“All of our clients on benefits budget in cash. This is because there can be surprises down the line with online payments suddenly being taken. Benefits can stop without warning but the Direct Debits will still be active, leaving you out of pocket.”

Salvation Army, Shetland

“It’s easy to forget what payments have been made without a physical reminder in your purse. Paying on a card is dangerous.”

Age Manchester, Manchester

“I like to use cash as then I know and track my spending. It is extremely easy to overspend when my mental health is on a downward slope.” The Money Charity, Money and Mental Health Policy Institute focus group



Risk of financial abuse



Digital payments can lead to vulnerable consumers losing control of their finances or being taken advantage of – sometimes by partners, carers or family members. Using and budgeting in cash can help people keep control more easily. Someone with limited physical mobility may ask a friend or carer to do their shopping. Giving them cash instead of a card limits the risk and makes it easier to check how much was spent.

Those who are less familiar with the digital world may be more vulnerable to scams: giving someone online access to a bank account or card can have devastating consequences. A malicious user can empty an entire account online in a few clicks, any time of the day or night, and it's often impossible to remedy or rectify afterwards. So many see cash as a safer way to manage savings and spending.

On the other hand, others mentioned that being able to reconcile digital payments can help identify abuse.

“If couples have a joint bank account, money can be tracked and controlled by one person. This can lead to financial and emotional abuse.”

The Money Charity, Money and Mental Health Policy Institute focus group

“What about the visually impaired? People with conditions like that cannot see the screen – how do they know if they're being ripped off or not?”

The Consumer Council, Belfast

“Digital money can be arbitrary because people with certain mental health issues don't have that foresight and hindsight.”

ADHD Foundation, Manchester



Risk to community and connection



Making transactions is a form of interaction that's natural to us all. It helps people connect, and cash can be an enabler for making these connections. People value their physical connection with cash; it gives value to things, and it has value of itself. Without physical transactions, that sense of community may weaken.

Community's importance in our ageing society is being increasingly recognised. For example, Public Health England encourages postal workers to check up on older people as they do their rounds, and recognises how important regular interaction is for mental health.²⁷ There's a risk that the move to a cashless society could reduce the opportunity for interaction, and so negatively affect communities.

"We work for people with Alzheimer's. They often find change extremely scary. They like to use cash because they are worried about holding up a queue if they can't remember their PIN. This can stop them from going out as often into a confusing world."

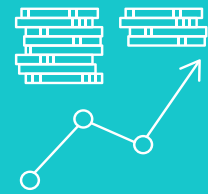
Alzheimer's Society, Cardiff

"The world is changing. People work from home more often, we have meetings via conference calls, people shop online, food is delivered. With electronic payments, there is even less human interaction."

Wyvern Savings & Loans, Bournemouth

²⁷ <https://www.gov.uk/government/news/pm-launches-governments-first-loneliness-strategy>

Risk of poorest paying most



We've known for a long time that people tend to pay more if they can only pay cash: they can't shop around for online deals or discounts, or easily get credit.

So far high street shopping has been immune, but now, as cash is used less, the infrastructure to support it is scaling back. This is leaving small businesses and charities with higher costs to handle cash and leading many to consider dropping it altogether. As more people go digital, those who depend on cash risk losing access to shops and services. In time, could a stigma develop around the 'cash shopper' with the threat of being excluded from mainstream society?

"There is a disability premium in that people with certain disabilities often have to use the service which has the best usability. They can't shop around and try different services for the cheapest one."

Disability Rights UK

"We are not sure that it is acceptable for shops to refuse to take cash payments. The more common this practice becomes, the more likely it is that certain groups of people become socially and economically excluded."

Money Advice Trust



Risk of catastrophic failure



A near-cashless UK would face significant risks from a system failure or cyber-attack without a non-digital fall-back. This risk is real: in Sweden – where cash has reduced to very low levels – it has prompted debates in parliament, leafleting of the public, and contingency planning by the Swedish central bank, the Riksbank.

Recent IT failures in the UK have left consumers unable to pay for goods. Cash is the current fall-back for UK consumers as it's widespread and works without power or internet. But as cash use drops, the cash infrastructure's ability to act as a backup will also diminish. Even now, there's not enough cash in the right places to keep a cash economy working for long if we were to lose digital or power connections.

“Two years ago, the internet went down on the island. Our only friends were those with cash.”
Hotelier, Shetland

“Everyone has to trust the virtual cash system for it to work. There would need to be a national infrastructure.”
British Beer and Pub Association

“All you need is a few data breaches where bad things happen before we lose trust in new systems.”
Contact the Elderly

The UK isn't alone in facing this challenge

Falling cash use is an issue for many countries. The fall is highest across northern Europe, where as few as one in five payments is now in cash.

In these countries, while some consumers still use cash and cash payments are still widely accepted, it's becoming less common, and more consumers are moving to digital payments only. In general, digital and card payments are favoured in wealthier economies: cash usage has fallen well below 50% in Sweden, Denmark, Finland, the Netherlands, Canada, France, and the United States. There are some exceptions, including Germany, Austria and Japan. These are wealthy countries with a strong cultural preference for cash in shops, despite the universal availability of electronic payments instruments and broad use of electronic transfers for recurring payments.

The challenges in these low cash countries are the same as in the UK. Sweden has seen a dramatic decline in cash use, according to its central bank, the Riksbank.²⁸ In 2010, around 40% of retail payments were made in cash, and this figure has now declined to 15% (compared to over 30% in the UK). Around 20% of Swedish people say they never withdraw cash at all. Approximately 900 of the 1,600 Swedish bank branches no longer distribute cash or accept cash deposits. This is worrying some people, though, and a national commission has been established to explore how to make sure people don't get left behind. Mats Dillén, head of the parliamentary review, said, 'If this development with cash disappearing happens too fast, it can be difficult to maintain the infrastructure for handling cash... one may get into a negative spiral which can threaten the cash infrastructure.'

In the Netherlands, Central Bank Chief Coen Voormeulen recently commented that the shift to a cashless society can bring problems. 'Lots of people have difficulty using a debit card, including the elderly and the

visually handicapped,' he said. 'Hacking and computer breakdowns are also an issue. Going cash-free makes a society vulnerable.'²⁹

Denmark has concerns too, with only 23% of payments in cash, and 46% of Danes carrying less than Kr100 on them (about £12). However, 50% of Danes said they'd find it problematic if there were no cash in society and, unlike many other countries, shops in Denmark are obliged to accept cash.

Even in the US, cash use is causing concern. Nationally there is no requirement to accept cash, but at a state level Philadelphia joins a number of US cities and states pushing against the cashless trend. New Jersey lawmakers recently passed a bill banning cashless retail, and Washington DC and New York City have also proposed bills prohibiting cashless stores. Massachusetts is the only state to ban the practice.³⁰

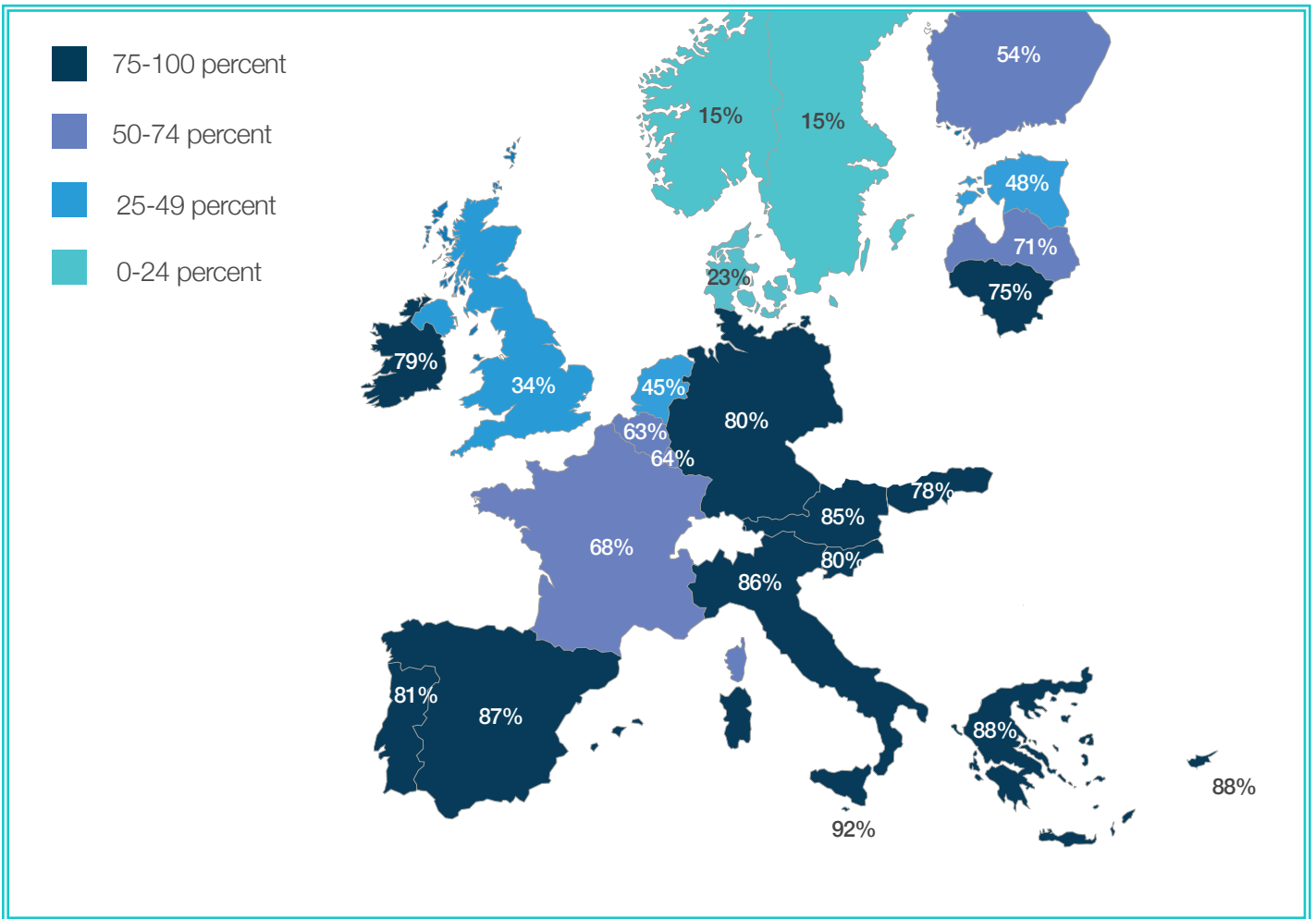


We need to pause and think about whether this is good or bad, and not just sit back and let it happen. If cash disappears, that would be a big change, with major implications for society and the economy.



Mats Dillén, head of a Swedish parliamentary committee

Share of cash payments carried out by households at points of sale in UK, Nordics and Euro Area



We have around one million people who aren't comfortable using computers, iPads or iPhones for banking. We aren't against the digital movement, but we think it's going a bit too fast.



Christina Tallberg, 75, President of Swedish National Pensioners Organization

05 KEEPING CASH VIABLE



Rethinking cash – not maintaining the status quo

We've concluded that the UK isn't ready to go cashless in the next 15 years, and that a sizeable part of the UK population will need cash for some time. This means we'll still need a cash infrastructure to make sure we don't leave people behind.

What does this mean, though? Preserving what we have now? Or thinking differently and adapting our infrastructure to suit a world of declining cash use?

The debate so far has been around bank branch closures, ATM closures, and charges at ATMs. They're important issues: people withdraw 90% of their cash from ATMs, and both individuals and consumers use bank branches to deposit cash.

There's much more to consider, though. There's a complex value chain behind how notes and coins move, from their minting or printing, through years of use to their eventual destruction. Any weakness in this chain can threaten the viability of cash. And getting hold of cash is only half the equation: you need to be able to spend it too. This brings in retailers, government, local councils, bus and train companies and more – all of whom can choose to accept cash or not. If cash is going to stay viable for the next 15 years, we need to look at the whole system.

But is this about preserving the status quo, or looking for something new? We live in a fast-changing and increasingly digital society, where things change quickly. Online shopping is threatening our high streets, with household names struggling and even disappearing. The ways we consume media, TV, movies and music have also changed enormously in the last decade. We want to buy tickets for flights, concerts and cinema trips online and store them on our phones. It's convenient but what about those who can't access these digital channels?

These changes are about more than cash. Some can seem destructive, but others bring choice, convenience and opportunities which would have seemed unbelievable a few years ago.

So could we simply preserve cash and the current infrastructure? Keep on doing what we're doing now? It's unlikely. Just as retailers are transforming to adapt to digital and high streets are changing to cope with the internet, we need to rethink cash.

The UK's cash infrastructure is complex. It has multiple dependencies and was built for steady or increasing volumes. Built for a different age, it has many different parts run by different commercial players, with no single point of oversight. Right now, there are very limited powers for anyone to step in if the market fails. Cracks are appearing as we see branch and ATM closures and dire warnings of what might happen.³¹

Doing nothing will lead to more fractures because our cash infrastructure was built for a world of high cash volumes where cash distribution was competitive. In a society which isn't ready to go entirely cashless, cash is a core part of Britain's infrastructure, and essential to people's daily lives. The cash system has been extraordinarily effective and resilient but won't stay that way if volumes keep declining.



...the fall in cash usage poses challenges for the supply chain that services the ATM and cash distribution network.

UK Finance



Our changing society

15 years ago...



**YELLOW
PAGES™**

- If you wanted to contact someone in 2003, you'd pick up the trusty phonebook. And for businesses, every house had a Yellow Pages.
- Our PCs were bulky desktops, and getting online would always start with a dial-up tone.
- The Nokia 1100 was the most popular phone on the market with its distinctive ringtone.
- And people read their newspapers on, well, paper.

15 years from now?



- By 2033, new technology could dominate our lives.
- Driverless cars will be common, but what about hoverboards?
- Electric cars will be the norm with new charging stations across our towns and cities.
- Drones will be used to complete everyday tasks: delivering packages and even takeaways.
- With lifespans increasing to 100 or more years, chronic diseases will be 'controlled' rather than cured.
- People will increasingly be connected to health services digitally, with their health monitored remotely.
- Nanotechnology in our bodies, or devices we wear, will offer amazing insights into how our bodies are functioning.
- Developments in bioengineering are likely to allow us to use implants to improve our eyesight, hearing or even memory.
- Smart thermostats, lighting, fridges and appliances are starting to work when we ask them to, but increasingly predict our needs.

The costs of cash

Most people assume cash is free: after all, consumers rarely pay to get it or use it. But those who accept it – stores, merchants and service providers – have to weigh cash's costs against alternatives like cards and other payment methods.



The decision to go cashless should be a proactive one for small business owners – it shouldn't come about as the result of unreasonable banking fees.



Federation of Small Businesses

There are direct costs of cash, such as bank charges. But there are also indirect costs: staff time to 'cash up'; insurance to cover the costs of being robbed; staff time and petrol costs to take cash to the bank branch to pay it in; and the costs of minor theft or when the till just doesn't tally up with the takings. Comparing cash costs against cards and digital payments is complex and controversial. Some costs are hidden or at least unquantified, and individual merchants – especially the larger ones – make their own bespoke arrangements with their bank rather than using published tariffs. The way that merchants pay for cash access is different from how they pay for digital transactions: digital transactions are usually charged as a percentage of each transaction's value, whereas cash transaction costs are bundled together, and are more likely to be fixed regardless of how much income is taken. In our review there was no real consensus: we heard passionate arguments that both cash and digital were far cheaper than the alternative. Many acknowledged this range of perceptions, not least as costs can change with a seller's circumstances.

The British Retail Consortium has conducted member surveys to compare payment costs. At the time, they found that direct cash costs were markedly cheaper than card payments.³² Since then, regulation changes have reduced the costs of digital payments, which are now capped at 0.2% for debit and 0.3% for credit³³ although this is just one

part of the cost that's passed on to retailers. Once you add merchant fees etc, the card payment costs incurred by most merchants seem comparable to published charges for cash banking at around 0.5-0.9%. However, although cash banking charges vary from bank to bank and have turnover and threshold limits, industry information suggests cash costs have been rising. Also, quoted bank cash costs exclude indirect costs including holding cash floats, taking cash to the bank, extra security and reconciliation, plus the losses through wastage and theft.

Cash Services has conducted research which has highlighted these hidden costs.³⁴ This 2017 survey looked at merchants with under £1m turnover and showed they generally perceived that cash was cheaper but weren't clear about which costs made up the total. This was different for cards, which have clear transaction fees and terminal costs.

As well as the levelling out of cash and card costs, changes to card interchange rules have changed how merchants deal with customers. First, merchants can't add surcharges to credit card transactions to cover the additional interchange. In most cases this means customers pay the same for credit and debit card purchases, so there's no reason for them to choose one or the other on price. However, in some cases organisations have stopped accepting credit cards because they

³² Source: BRC Payments Survey 2016

³³ <https://www.psr.org.uk/psr-focus/card-payments/the-interchange-fee-regulation>

³⁴ Cash Services, Smaller Retailer Research 2017

would have to spread their additional costs across all transactions. HMRC have taken this approach: they don't want debit card users to subsidise credit card users.³⁵

The other big change is that debit card interchange is now 'ad-valorem', which means it's based on the value of the transaction rather than a fixed fee. This has two effects. Firstly, merchants are happier to take smaller card payments as the fee is very small on low value items. Secondly, merchants may now be reluctant to offer cashback as they now need to pay additional interchange on the cash given to the customer.

Overall, interchange fee changes have encouraged merchants to accept cards as well as cash for small payments. It's getting rarer and rarer to see signs setting a minimum card payment of £5 or £10.

This current position – with cash and cards equally accepted – is at risk, though. Merchants are very sensitive to commercial incentives, and as cash use declines, we expect cash banking costs to rise against card costs. Part of this is economics: lower volumes need

higher prices to cover fixed costs. But banks also have a commercial incentive to reduce cash use: interchange and merchant fees generate income every time someone pays by card. By contrast, a bank has to pay every time a customer takes cash from an ATM, earns nothing when it's spent, and may only generate a limited opportunity for profit when it's banked – and not necessarily for the customer's bank. It's not surprising that some see banks as 'anti-cash'.³⁶ If cash banking costs rise compared to cards, merchants will be reluctant to accept cash in future. There's a real risk that our current model could cause consumer detriment for these reasons.



³⁵ <https://www.gov.uk/guidance/withdrawal-of-personal-credit-card-payments-cip29>

³⁶ The War Against Cash: The plot to empty your wallet and own your financial future – and why you MUST fight it – Ross Clark

The UK's complex cash infrastructure

Every time you pay with cash or use an ATM, there's a complex system making sure the notes and coins needed are in the right place.

Printing and minting - Bank of England banknotes are printed under contract by De La Rue Currency, while coins are produced by the Royal Mint.

Wholesale Distribution - new notes are distributed primarily to Note Circulation Scheme (NCS) cash centres where they are stored and purchased at face value from the Bank of England when required. The NCS provides a framework for the wholesale commercial cash industry which encourages efficiencies in their banknote operations. Legal agreements and rules underpin how the NCS operates, and current members are G4S Cash Solutions, the Post Office, National Westminster Bank and Vaultex. NCS members prepare new notes, as well as used notes that are fit for reissue, for distribution.

Retail distribution - notes are distributed to bank or Post Office branches, ATMs (which may be done by independent ATM Operators), and shops (either directly or via depots) in armoured vans. Consumers then get the notes from ATMs (for around 90% of all cash withdrawals) but also Post Office and bank branch counters, in wages and benefits, and from other people as change, gifts or payments. Consumers either spend their cash or save it (saving defined as up to a year) or hoard it (longer than a year). Some cash is also taken or sent abroad.

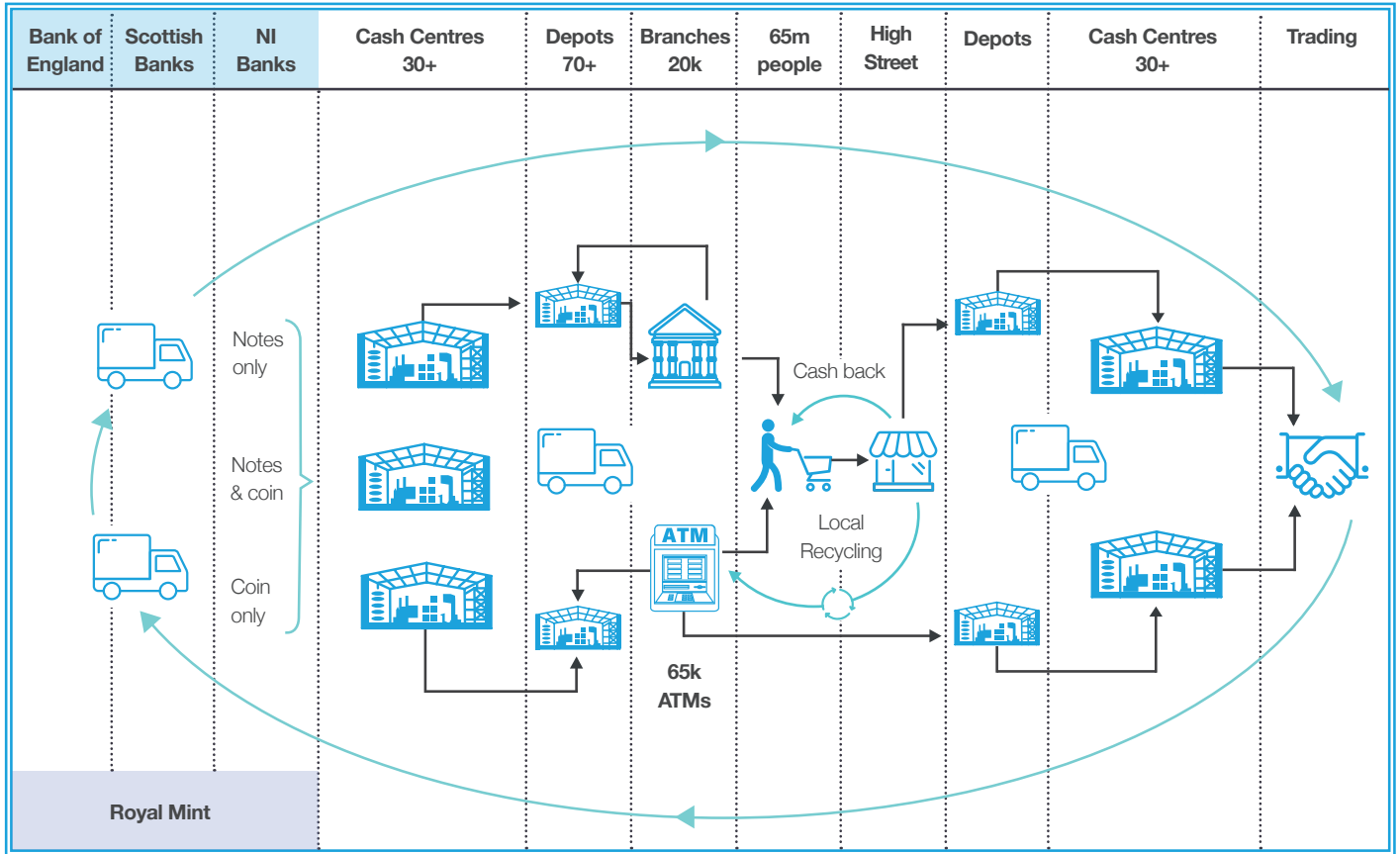
Cash spent in shops is taken to local depots or NCS cash centres (depending on geography and size of retailer) by armoured van, or for smaller stores by physically taking it to the bank or Post Office. It can also be used as change to other customers, distributed through on-site ATMs, or spent directly on stock or wages. Costs vary significantly and can depend on wider commercial relationships: the typical range is between less than 1p per £100 and 70p per £100. Those paying the least will typically be large retailers depositing billions of pounds to cash centres each year. These high volumes follow efficient and automated routes with little human intervention, and retailers often have wider business relations with the bank. Those paying higher charges are typically businesses paying in low volumes of cash over the branch counter – most small retailers and charities. This involves a lot of manual handling and applying of credits, plus the costs of moving cash to processing centres.

After a period of time circulating in the local cash economy, notes are returned to an NCS cash centre. They're sorted by high-speed machines which can process up to 2,000 banknotes every minute to check they're current, genuine and in good condition. The Bank of England sets quality standards that NCS members use to tell whether a note is good enough to be redistributed. Dirty notes and those with holes and tears are returned to the Bank of England to be destroyed. Fit notes are re-circulated.

Coins follow a similar process, but they go to bank branches and Post Offices, not to ATMs. Shops then get 'rolled coin' packed in paper cylinders, or 'shot' and 'sachet' coin, which they distribute as change.

Scotland and Northern Ireland banknotes are issued by members of the Association of Commercial Banknote Issuers (ACBI). Although they are not distributed under the NCS arrangements, the underlying processes and infrastructure supporting banknote issuance are similar.

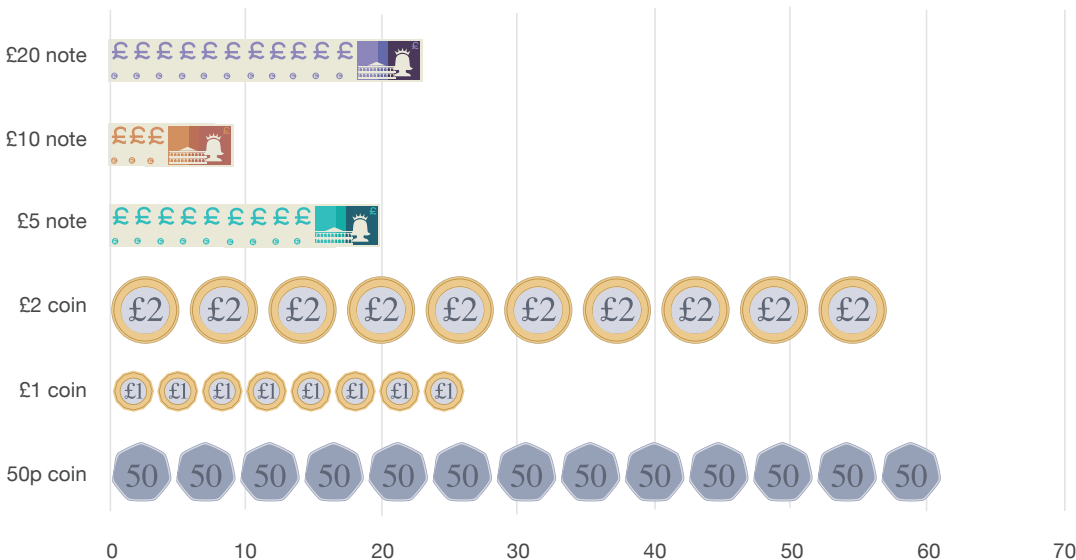
Cash cycle



Note circulation velocity

The different denominations of notes and coin circulate around the cash cycle at different rates so the time taken for each to return to a cash centre varies significantly.³⁷ This is a function of how they are used. Some notes and coins are lost and never returned. Some are hoarded and saved, either overseas or in the UK. Some sit in consumers' purses and wallet. And some are recycled through change, being spent multiple times without being banked.

Average weeks in circulation



³⁷ Cash Services monitor this on a quarterly basis, i.e. what is the average time before a note or coin is seen back at a cash centre. The circulation time of £20s is longer than it would otherwise be as it is yet to move to polymer.

The £5bn cost of the UK's cash infrastructure

The UK's cash distribution system is well established, serving over 300,000 retail premises and 65,000 ATMs. It's also expensive, with costs estimated at around £5bn per year.

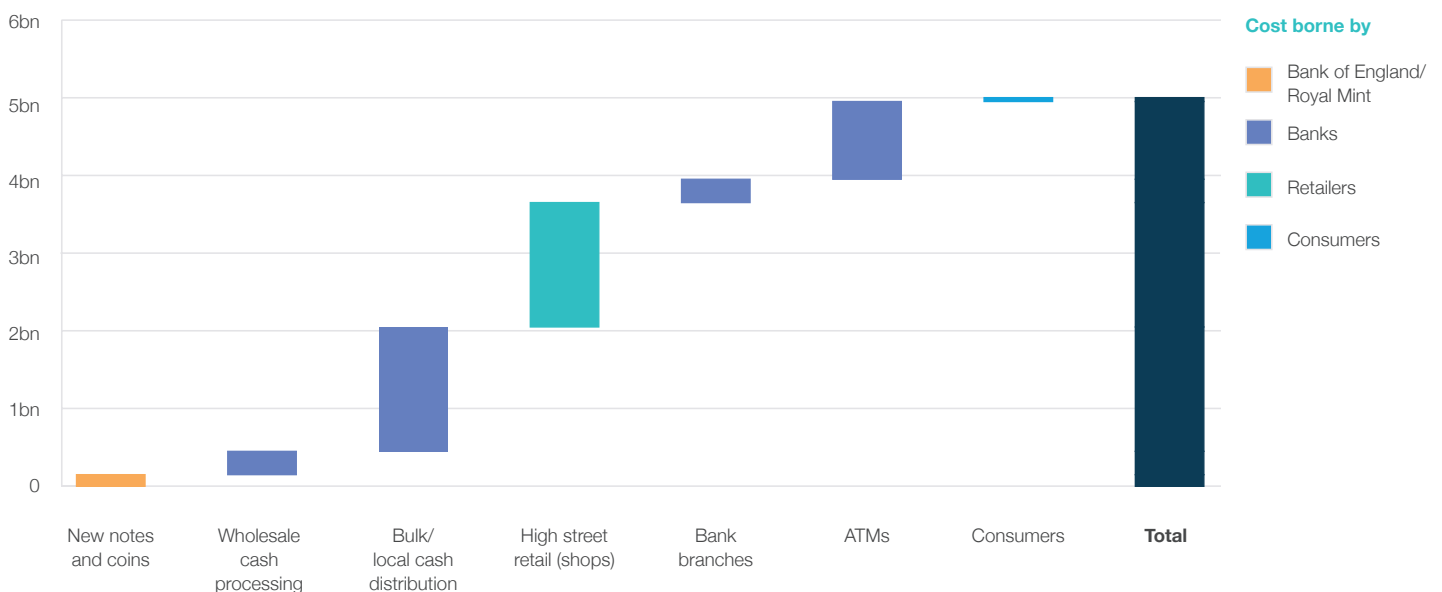
The costs of managing and handling cash don't all sit in one place. They are borne by different organisations at different stages of the cash cycle. Some are very easily measurable, such as the costs of running ATMs, and others are harder to pin down, such as the costs to retailers of handling cash. All together we estimate these costs at £5bn per year.³⁸ Some commentators put this cost even higher, with costs potentially as high as £9bn per year.³⁹ Around £2bn of this cost is attributable to cash processing and distribution - which is largely invisible to the public. Another £1bn relates to running and maintaining ATMs.

This doesn't include cash that's being saved, hoarded or moved overseas. Like almost every other country, the UK has seen rising total cash in circulation. However, this doesn't mean that all this cash is necessarily being moved around the system as people use it day-to-day.

This analysis suggests the following approximate unit costs based on 15bn cash payments a year worth around £175bn. This assumes a total cost per cash payment of 33p and a cost per £1 spent of 2.8p.

Costs*	Value held	Cost (annual)	Per Transaction cost
Printing and coin production		£100m - notes, £50m - coin	
Wholesale cash processing (Note Circulation Scheme, NCS)	£2bn	£0.3bn	2p
Bulk and local cash distribution	£5bn	£1.6bn	11p
High street retail (shops)	£19bn	£1.6bn	11p
High street bank branches	£2bn	£0.3bn	2p
ATMs	£7bn	£1.0bn	7p
Consumer jam jar holding and handling	£6bn	£50m	<1p
Total	£41bn	£5bn	33p

Cash Value Chain



³⁸ Cash Services and LINK estimates £5bn is estimated by comparing the costs of cash calculated for a range of other countries vs their GDP and applying that to the UK.
³⁹ Institute and Faculty of Actuaries: A Cashless Society – Benefits Risks and Issues

* Costs estimated by removing the £1bn cost of the ATM network (calculated by LINK) from £5bn and dividing the remainder based on cash value held. Then adjusting for industry cost per unit calculations.



As demand for cash continues to decline, those industry participants that incur costs have a clear incentive to innovate to reduce or share the fixed costs of cash provision. Regulators should work with the industry to ensure commercial decision-making is connected to, not insulated from, those incentives.



Lloyds Bank

Cash use has halved in the last ten years and is forecast to halve again in the next ten. The cash infrastructure, and services which supply cash and accept deposits, are run by commercial entities, with the cost ultimately borne by consumers in taxes and charges. Simple economics suggests that if we do nothing, the unit costs of cash could rise significantly over the next 10-15 years – potentially doubling.

As volumes drop, the unit cost for processing cash is likely to rise to a point where the party paying can't absorb the cost (which is ultimately borne by customers). It's possible to spread cash costs across all customers (whether they use cash or not), but this cross-subsidy isn't necessarily sustainable because in a competitive market, banks and retailers can choose to not process cash at all and to offer their customers a lower overall cost. It may seem far-fetched, but many Swedish bank branches already refuse to handle consumer cash, and we're seeing UK pubs and cafes starting to go cash free. At this stage they probably aren't passing savings to customers, but as it increases then cashless stores could offer lower prices and a smoother consumer experience than those which take cash.

While some elements of the value chain are largely fixed and others may be more variable, all of them may be under threat. Cash centres are capital-intensive buildings and they need to cover the whole country, though there may be opportunities to consolidate them further into larger competing, commercial super-cash centres.

If we want to preserve cash in the face of falling volumes, we'll have to lower costs. We need an infrastructure that the largely private sector organisations running it can afford, and which doesn't cost more than retailers and consumers are willing to pay. This isn't about helping banks make more profits – it's about keeping the cash infrastructure viable.

This challenge isn't unique to cash. There are direct parallels here with the challenges facing retailers, restaurants and other organisations running high cost infrastructures when volumes are falling. However, the consequences of cash failing are, we believe, far higher than the consequences of individual retailers failing – so we need to find a structural, UK-wide solution.

We need to ensure that, as cash use reduces, we make cost savings in the infrastructure in order to maintain cash access, and to keep the whole cash infrastructure viable. This demands radical thinking.



A more coordinated, utility approach to the cash supply chain would inevitably reduce system costs regardless of the number of consumer access points.

Barclays



Cardtronics' belief is that the cash supply chain must be protected and must be free from the market forces upon which these providers rely. A large portion of the overall cash supply chain cost is tied up in cash centres, and the only way for this to be sustainable would be to change the regulatory landscape to create a cash 'utility'.



Cardtronics

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Various scenarios threaten the viability of cash in the UK

Scenario 1 – cash deserts

The UK has around 65,000 ATMs, almost all connected to the LINK network. They're owned and operated by banks and building societies (40%) and independent ATM operators (60%). Of these, around 53,500 (82%) are free-to-use, while the remaining 11,500 (18%) charge.⁴⁰

The companies operating free-to-use ATMs are funded by a flat per-transaction fee, known as 'interchange', which is paid by the customer's card issuer (i.e. bank or building society). LINK sets this fee to cover to costs of providing the service. At charging ATMs, the consumer pays an up-front fee to cover the cost of the ATM, averaging £1.75.

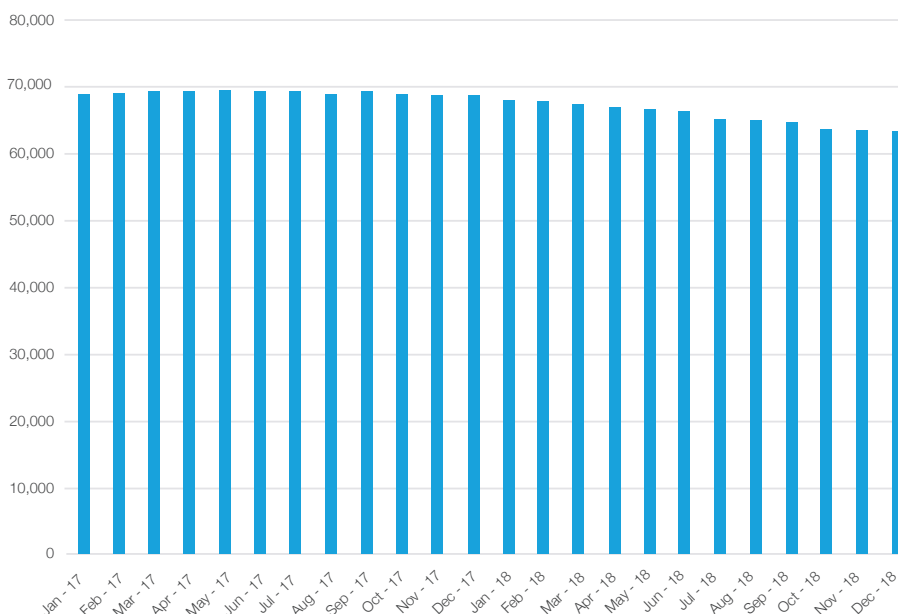
The business model for ATMs is simple: the fee paid has to cover the cost of installing and running the ATM, including rent to the site owner. For free-to-use ATMs these costs need to be covered by the interchange – though if an 'operator' has many machines they may use more frequently used machines to subsidise others. In that case, the fee needs only to cover the marginal cost of running a particular ATM.

For all ATMs, the operator wants costs to be lower than income, whether that's from interchange or direct charges.

ATM usage is now falling at about 6% year on year. Because income is entirely per-transaction, the fall in ATM use is putting these economic models under strain. While some costs, like rental, can be reduced, many cannot. So for free-to-use ATMs that don't see as much use – often in rural and remote areas – the per-transaction interchange fees don't cover their marginal cost. This means that keeping the ATM going involves making a loss. As a result, these ATMs tend to be removed or closed by commercial operators. For charging ATMs, operators can raise the fee – though this often reduces use and consumers tend not to use machines with fees over £2.00.

This reduction in ATM numbers is already happening. LINK report there are 4,500 ATMs fewer than when the network was largest in 2017 and consumer groups are increasingly concerned that remote or rural communities are being excluded.⁴¹

ATM number over time



As well as risk to individual ATMs, there's a more systemic risk to the viability of the ATM operators and so the overall network. 60% of the UK's ATMs are run by independent operators (IADs), and it's a very concentrated market: 57% of all ATMs are run by just four IADs, and two of those run just under 50%. While banks and building societies operate ATMs as part of a wider set of services to their customers, IADs only run ATMs. If they feel the market is becoming unsustainable as volumes decline, they can simply close. They don't have the wider issue of a customer banking relationship to consider. A single failure or market exit of a major ATM operator could shut many thousands of ATMs overnight.

40 LINK ATM Scheme
41 LINK ATM Scheme



Scenario 2 – the cash infrastructure ‘fails’

The UK’s cash infrastructure is concentrated. Relatively few commercial operators carry out specialist operations – so there’s a risk if one of more of these organisations scales back or ends its work in this area because it’s not commercially viable.

There are six wholesale banks in the UK that buy and sell notes and coin in bulk: Barclays, Clydesdale, HSBC, Lloyds, National Westminster Bank and Santander. They’re supported by the four members of the wholesale Note Circulation Scheme (NCS), who access a network of 30+ note and coin cash centres across the UK: Vaultex, G4S, Post Office and NatWest. Each of these has a unique business model and offers a range of services. These NCS members also feed cash through to five retail service cash processors. These processors have a similar business model to NCS members, though they can also include vans which make bulk cash and high street cash collections and replenish ATMs.

This transportation, cash in transit (CiT), is another concentrated market. Cash needs moving from the 30+ cash centres, through 70+ smaller cash depots, and then to bank branches, ATMs, Post Offices and stores. This final step is dominated by G4S and Loomis. Bulk cash is obviously very valuable and vulnerable to theft, so security is paramount with secure buildings, careful procedures, armoured vans, and trained and certified crews.

These organisations are all commercial entities. They’re making business decisions based on a market where consumer demand for cash for payments may halve in the next 10 years – and they’re already feeling this pressure. Demand for notes has declined at 6% per annum for the past two years and demand for coins in the UK has been steadily declining at 6% per annum for the past 10 years

(excluding the 2017 £1 coin modernisation program). The coin market is particularly under strain as underlying high street demand is falling more rapidly than notes. The introduction of contactless payments are also having a big impact in the transport and vending sectors: both big users of coin. This means there is less coin in shops’ tills, but at this stage there is no unified end to end agreement at an industry level on what needs to happen to solve the issues.

Market restructuring and changes in ownership also carry the risk of further concentration and cost increases. As with ATMs, it’s a concentrated market with specialised operations, processes and equipment. This means if one of the players fails or leaves the market, it would be difficult to cover that capacity for both existing players and new entrants – even if they felt it was a sound commercial choice.

Scenario 3 – you can't spend cash

The number of card-only shops, restaurants, pubs and cafes is still small – but it's growing. We're getting used to the creeping cashlessness of unstaffed or less manned services: out-of-hours petrol stations, railway ticket machines, parking meters, and London buses and Underground. And of course, there's online shopping for products and services: all cashless.

A staffed business which is cashless is still a novelty outside major cities. It's generally limited to discretionary services which wouldn't be a major problem to miss out on. After all, there's always another coffee shop or pub nearby. But what if this trickle swells to a flood? What if essential services are affected – like the Swedish hospitals which refuse cash from patients and visitors?

As a business takes less and less cash, it may question many of the costs associated with cash. A business which takes cash needs tills, a process for counting, checking and banking cash, and ways to minimise the risk of theft. If they don't accept any cash then most of these costs vanish completely. Automated terminals can take routine queries and transactions, and staff can focus on added value interactions and sales, not just standing behind a till. A cashless 'store of the future' may well offer a retailer ways to compete against the threat of online shopping.⁴²

We can look to Sweden to see what might happen. With Swedish cash usage only accounting for around 15% of payments, retailers are going cashless and service providers are starting to reject cash. This is worrying policy makers and consumer groups, and the

government is looking at the issue. The Swedish Retail and Wholesale Council's study showed half of Swedish retailers say that they probably won't accept cash after 2025. This is causing real concern and raises questions about how to maintain key services for those who can't or won't go cashless. When we visited, we found that the real death knell for cash in Sweden was likely to be retailers and service providers refusing cash – not the loss of ATMs and bank branches.

China – in many ways at the forefront of technology adoption – also sees the threat. China's central bank has had to remind merchants that it's illegal to reject cash as a payment method. The bank believes that not accepting cash could lead to loss of confidence in cash, and be unfair to those who aren't used to electronic payments. This follows cash usage in China dropping by nearly 10% in the past two years.⁴³



It is likely that the use of cash will continue to fall over time. However, this could well mean that certain groups of people become socially and economically excluded.

Money Advice Trust



As bank branches and ATMs close, cash is becoming less available, meaning its usage is dropping at an alarming rate, justifying further closures.

Federation of Small Businesses



06 WHAT NEEDS TO BE DONE?



We need to act now across the whole cash system

As things stand, millions of people will be left behind as cash use declines.

Commercial forces mean less ATM and branch coverage. More shops will stop taking cash. 17% of people – or 8m UK adults – are already either unsure of how they would cope or could not cope at all with a cashless society. This is a huge section of society, including but not limited to the older, rural and less well-off. And that's before we consider the risk of a more dramatic collapse of the system as commercial operators exit and their services disappear.

In our review, we've explored what needs to be done so no one is left behind. We've also examined the whole cash infrastructure, not just the parts that consumers see day-to-day. We've explored the participants' commercial drivers and motivations. And we've looked at the regulators, and the power they have to make a difference.

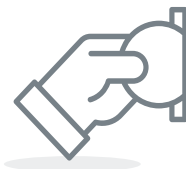
Our recommendations need to be practical and meet the needs of consumers, but which are also commercially viable. In developing our thinking we have worked extensively with consumer groups, regulators and commercial entities to understand the system in some detail, and to get below the surface to diagnose and treat the root causes of the issues.

Our analysis shows that if we want to keep cash viable for the next 15 years, we need to address the whole cash infrastructure: both cash access and cash deposits. It's more than simply saving ATMs. But at the same time, we also need to bring everyone into our digital society. We can't simply freeze the present or go back to the way things were.

We believe that there are 4 key issues to be addressed:



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

What options are there for cash access?



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If people need cash, they need to be able to get hold of it.

Cash will be essential to the UK, for at least the next 15 years. We therefore cannot leave people's access to it to chance. As a society we need to be able to make a fair guarantee of access, so everyone knows what they can expect. It needs to be reasonable too: while we can't leave rural villages without cash access, we can't expect an ATM on every street.

If we think beyond ATMs, we can actually do more, for more people, and at a lower cost. The first ATM was installed in 1967 – more than 50 years ago – and technology has moved on a lot since then. The UK relies heavily on ATMs, which make up 90% of cash withdrawals, but there are other routes too. Remember when supermarkets routinely asked if you wanted cashback? That stopped with changes to card interchange fees that meant cashback started costing stores, while installing and operating ATMs could give them income.

But using local shops for cash access – in addition to ATMs – makes a lot of sense, and rules can always be changed. LINK and PayPoint are planning a pilot of convenience store cashback. There are around 50,000 convenience stores in the UK.⁴⁴ They boast long opening hours, and are often in rural or deprived communities where there aren't any other services. A service like this could increase cash access for many communities. There's also the Post Office. It has a stable network of 11,500 branches – more than all the major banks combined – all offering cash access and deposits.⁴⁵ Clearly some communities will need the 24/7 access that ATMs offer, but for others a local convenience store offering cashback might work better than a trip to a nearby town or village. And it may be cheaper and more sustainable, as well as supporting local high streets.

And what about other cash innovation? Many of us are used to ordering our foreign currency for holidays online and getting it delivered through the post. In our call for evidence, some consumer groups suggested that allowing home delivery of cash would save many rural consumers from hours of travel to access cash.

There are digital innovators developing a range of solutions, and this should be encouraged. There is huge scope for innovation in the way cash is supplied. Opening up cash access to innovation may find new ways to access cash, while also reducing some of the costs of our current infrastructure, making cash sustainable for longer.

ATMs will remain important for the UK. Some of the necessary ATM access can be maintained through the existing mechanism of interchange: the fee the card issuer pays the ATM operator. LINK also has a number of financial inclusion programmes to subsidise or even commission ATMs in rural, deprived and remote areas. However, we need to think beyond equating cash access with ATMs. If there are no suitable premises for an ATM, if the local store cannot fit one in, or if the ATM is not commercially viable even with a subsidy, then we need to look at alternatives like the Post Office, cashback and other innovations. Cash access needs to be more than ATMs.



Further ATM innovations will support the use of cash.



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The future high street?



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ATMs offering **cash withdrawal** – either 24/7 machines outdoors, or in stores and accessible during opening hours. Some ATMs can also **accept deposits**.

65,000 across the UK



Wide range of services including **cash and cheque deposits and cash withdrawals**, either over the counter or through self-service terminals. Opening hours vary, with some opening evenings or weekends. Most services limited to own customers.

11,200 across the UK



Cash withdrawal, cash and cheque deposits from most major banks.

11,500 across UK



Cash withdrawal services – with 58% offering cashback and 62% having ATMs. Over half (64%) allow **bills to be paid in cash** via PayPoint or PayZone.

50,000 across the UK



CASH FACILITIES





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Digital payments which work for everyone

Profile – The Post Office

The Post Office is a commercial business with a social purpose. It's the UK's largest retail network, the largest financial services chain in the UK, and has more branches than all the UK's major banks put together (11,500). It is wholly owned by the government though the Department for Business, Energy and Industrial Strategy (BEIS), though BEIS isn't involved in day-to-day operations or in managing its branch network and staff.

Personal customers of all major banks and building societies can use Post Office counters to withdraw cash, pay in cash and cheques and obtain balances. Around 95% of business bank accounts also have Post Office access. Every Post Office can accept £2,000 in cash per transaction, while you can pay in £20,000 at main Post Offices, and if you make prior arrangements there's no limit. Post Offices also have over 2,600 ATMs installed, mostly run by the Bank of Ireland.

The Post Office's unique role includes providing a minimum network coverage of Post Offices and it receives a grant from government (the Network Subsidy Payment) towards the costs of maintaining the network. The Government's national access criteria are:

- 99% of the population to be within three miles of their nearest Post Office
- 90% of the population to be within one mile of their nearest Post Office
- 99% of the population in deprived urban areas to be within one mile of their nearest Post Office
- 95% of the urban population to be within one mile of their nearest Post Office
- 95% of the total rural population to be within three miles of their nearest Post Office
- In remote rural areas: 95% of the population of every postcode district to be within six miles of their nearest Post Office.

The Post Office is also part of the Critical National Infrastructure as a cash utility. It's the only organisation that can take money directly from the Royal Mint to the 11,500 communities it serves. When technology fails and the fall back is cash, the Post Office is a key part of the contingency.

As Citizens Advice (CAB) has reported, Post Offices are well placed to provide basic banking services. However, CAB's research also showed more than two in five people still don't know about these services, and Post Offices are rarely people's first choice for accessing banking services.⁴⁶ Only 5% withdraw and 2% deposit cash primarily from a Post Office, and around half of people who are aware of banking services haven't used them before. This suggests there are significant opportunities to develop Post Offices as a channel for cash access.

However, both the CAB and our own research showed occasional issues with service levels and queues at some, particularly smaller branches. People also mentioned privacy when withdrawing or depositing cash in small communities. Still, as bank branch numbers decline the Post Office is a key component of future cash access and has been investing in equipment and training to meet this need.





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Digital payments which work for everyone

Local convenience store cashback developments

There are over 50,000 convenience stores across the UK and they could be a valuable source of cash for local communities. LINK – in conjunction with PayPoint – is planning a new service offering cash and balance enquires through PayPoint's convenience store terminals. This will allow cash access in areas where transaction volumes are too low to make an ATM cost effective: something we'll see more of as cash and ATM use declines.

Consumers with a LINK-enabled debit card (virtually all UK cards) will use chip and PIN terminals at the retailer's till. PayPoint already work with retailers in 50,000 sites across the UK, often in some of the most rural and deprived areas, so this service would improve cash access in areas where we already have some of the biggest problems, as well as allowing consumers to access small balances in their accounts: less than £10 or even £5. LINK's pilot, subject to regulatory approval, will be run in around 20 deprived and rural locations across the UK. If it's successful, it will be rolled out more widely.

Lloyds Banking Group, in partnership with Visa, has also recently announced a pilot scheme to boost the number of retailers offering cashback. Lloyds will pay a fee to retailers for processing cashback transactions with the aim of increasing the number of places where consumers can withdraw money. Initially customers will still be required to make a purchase in line with current cashback rules but the intention is that retailers will soon be able to offer cashback without the need for a purchase.

Both these schemes will target those areas where consumers may struggle to access cash, such as rural or less-affluent areas, which often rely on a very small number of ATMs. For consumers in the most deprived areas and those managing their budgets to tight margins, accessing small balances can make a real difference.





Should consumers be routinely charged for cash access?



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Digital payments which work for everyone

Should consumers pay for cash access, whether through ATMs directly or through some other indirect charges? It happens in many other countries but in our view, it's not right for the UK.

The current situation – where almost all cash access is free to the consumer – should continue. Charging wouldn't just be challenging for consumers to accept: in many cases it would impact the vulnerable most. It's also likely to drive us to a cashless society far quicker than otherwise, and before we've had chance to include everyone in a future of digital and cash.

The UK is relatively unusual in that most cash access channels are free. That includes almost all ATM cash withdrawals (more than 97%), and other channels like Post Offices, bank branches and cashback.

This wasn't always the case, and you'll still find charging ATMs in locations which can't justify a free-to-use ATM. These charging ATMs are currently falling in number. While they only make up a small share of cash access, they provide a valuable service in low-footfall locations, and a source of income for small shops. They also offer choice to consumers who are willing to pay for cash access in places that won't support free-to-use ATMs, including quiet stores, pubs, clubs, and festivals. Banning such ATMs would be counterproductive - it is likely to just cause them to close, reducing cash access.

There *are* arguments for charging at ATMs. Proponents of charging argue that if the cost was borne directly by those using the service, consumers could make a rational, cost-based decision on whether to use cash or another payment method. However, this would make cash access different from other services provided under the 'free banking' model of most UK banks. At present, ATM costs and the costs of other routine services like cheques, Direct Debits and

standing orders are part of the general costs of doing business, and borne across the banks' customer base through forgone interest, penalty charges etc. The FCA's recent Strategic Review of Retail Banking Business Models gives more details.⁴⁷

However, our reason for opposing charging for ATM use is not about cash being singled out from other bank charges. Our concern is that the impact of widespread ATM charging is likely to be very uneven, and counter to any social justice objectives. Those with choice would be likely to cut their cash usage dramatically. With plummeting volumes, the rapidly rising unit costs would be carried by an ever-smaller population of cash users, including some of the most vulnerable and those with no choice. This could lead to a rapid 'death spiral' for cash. Countries which have moved to this model – notably Australia – found the impacts on consumers were unacceptable, and banks moved back to free ATM access at their ATMs.



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

How other countries charge for cash

There are a wide range of business models behind how consumers pay for cash.

In some countries (US, Australia, Canada and more) there are significant networks of independent, non-bank ATMs. These almost always charge consumers an up-front fee. These may also be combined with issuer charges from their bank. In the US, average out-of-network ATM fees were \$4.57 in 2016.⁴⁸

Other countries like Norway have no up-front fee, but major card issuers levy cash-advance fees unless the client pays a higher annual fee for their card.

In Germany, banks generally charge fees for withdrawals at another bank's ATM and fees range from €1.95 to €5. All ATMs are connected to the national Girocard interbank network and ATM owners often join one of the smaller ATM groups that mutually lower or waive fees, so their customers can withdraw free of charge. An example of this is the savings banks association Sparkassen which has around 24,600 ATMs.

Charging for cash in the UK

Cash access in the UK is almost entirely free to the individual customer (though business bank accounts may incur a fee).

Between 97% and 98% of cash withdrawals are free, despite charging ATMs accounting for 18% of all ATMs.⁴⁹ Issuer charges are common in many countries, where banks charge their customers when they use another institution's ATMs. But in the UK they were abolished around 1999-2000. While there is nothing to prevent a bank from reintroducing them (e.g. LINK rules), competitive pressures have prevented this from happening yet.

The alternatives are Post Office or bank counters. Once again, with the UK's free in-credit banking there's no charge for this. Cashback is also free, despite the retailer usually incurring additional interchange costs for providing the service.



Barclays remains committed to the free provision of access to cash and as such it has no plans to charge personal customers at point of use.

Barclays Bank



Consumers should not pay directly at the point of cash withdrawal. This would disproportionately affect vulnerable on low- and benefit-level incomes who are more likely to take out cash in small amounts repeatedly.

Federation of Small Businesses



Can we guarantee access to cash?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

At present, there is no general statutory guarantee of consumer access to cash, deposits or banking services.

But this doesn't mean that there are no programmes in place to protect consumers. As far as cash access is concerned, LINK operates the UK's ATM network and already has programmes to protect ATMs in deprived or rural areas. Supported by the Payments Systems Regulator (PSR), this involves subsidies for ATMs in deprived or remote areas. This year LINK is also introducing direct commissioning of ATMs: LINK is inviting ATM operators to bid to install, operate and maintain a batch of replacement free-to-use ATMs for a period of five years. Both these programmes are funded by LINK's card issuing members (banks and building societies). The PSR monitors developments closely and LINK has to provide and publish monthly reports on ATM cash access. However, the decision about where and how to operate an ATM is fundamentally a commercial decision for the ATM operator – bank, building society or independent ATM Operator (IAD).

Bank branch locations and closures are also a commercial matter for the institutions involved – though they're subject to the Branch Closure Protocol.⁵⁰ Only the Post Office has a statutory coverage requirement as part of its agreement with the government, and it receives Network Subsidy Payments to support this.

The lack of any clear guarantee of access to cash poses a risk. Commercial entities will make their own investment decisions based on profits in a declining market, and consumers' access to cash may begin to disappear.

This issue is not unique to the UK. In Sweden, the Riksdag (the Swedish Parliament) has agreed that the cash infrastructure must not be allowed to disappear before Parliament is satisfied that no societal detriment will arise. There is also a political consensus that the established banks have a responsibility to provide core cash services until digital solutions can meet the demands of all citizens. The proposed measures will mean no more than 0.3% of the

population will be over 25km from a facility to withdraw cash. Also, at least 98.8% of the population should be in a 25km radius of a cash deposit facility. It's proposed to review this every two years, and give powers to the Finansinspektionen (Swedish financial supervisory authority) to impose remedies and financial penalties for banks in breach of their obligations.

A Swedish innovation has been to let local communities flag for consideration any community which was underserved. As well as cash access services (ATMs, local shop cashback etc), this also covers deposit facilities for small businesses – equally critical to keeping local cash economies alive. A local community would still only get services if it met the criteria outlined in the guarantee – no services within 25km in Sweden's case.

A guarantee does seem like a sensible way forward for us too, given how critical cash is for the whole of the UK. However, such a guarantee and a mechanism to implement it would require careful consideration, negotiation and agreement. 25km may be suitable for a large country with a dispersed population like Sweden, but it's too far for the UK: LINK uses a 1km criterion for ATMs, but that has also been criticised for being too simplistic. Also, we might want to add other criteria into consideration, such as population size, or deprivation level, or travel times to other alternative provision. A straight distance measurement doesn't always make sense. And we would need to make sure that we're not maintaining facilities (paid for by customers) where no one wants or needs them, and that as consumer needs change and payment preferences change the guarantee changes too.

Potential mechanism for guaranteeing access to cash

We could take similar principles to the Swedish model and apply them to the UK. This would require identifying an independent organisation to play a proactive role in ensuring access to cash, applying standards which are agreed by regulators after consultation with industry and consumer groups.



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Agreed between regulators, industry and consumer groups. Ideally backed by primary legislation to enable regulators to enforce it.



CONSUMER ACCESS TO CASH GUARANTEED



The local community notify the independent body that the guarantee has been breached in their area, and ask the body to consider stepping in.

INDEPENDENT BODY

The independent body evaluates the situation. If the guarantee has been breached, it commissions or establishes a solution which meets local needs and is paid for by the banks.



The bank, ATM provider or retailer which has been offering cash access tells the independent body that they are withdrawing cash services from this market.



Should businesses be compelled to accept cash?



Access to cash



The acceptance of cash



The cash infrastructure

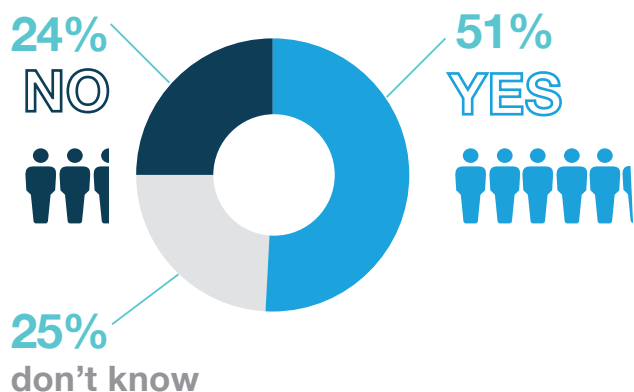


Digital payments which work for everyone

There's little point having access to cash if you can't use it. So how can we make sure that doesn't happen?

One approach would be to change the law and require all staffed shops and services to accept cash by law. We asked consumers about this: 51% felt it would be a good idea, while only 24% were opposed.⁵¹

Percentage of consumers that agree that UK businesses, shops and councils should be obliged to accept cash



that the acceptance of cash in retail transactions should be the rule, and refusal only possible for practical reasons (for example, if the retailer has no change).

In Sweden, there have been legal rulings that refusing cash for certain public services is unlawful. The debate is still running: Sweden's all-party commission on cash has considered and rejected the idea of universal, mandatory cash acceptance. In the US, the Treasury states that 'private businesses are free to develop their own policies on whether or not to accept cash, unless there is a State law which says otherwise.' Consequently, various retailers and airlines have started to refuse cash but in response New Jersey,⁵² Philadelphia and New York⁵³ are among US cities considering banning bricks and mortar stores from going cashless.

This approach has precedents. There's legislation to require cash acceptance in Denmark and Norway, as well as China. But all these countries have had problems making retailers follow the law – and it hasn't stopped cash usage falling, in some cases below UK levels. This approach isn't common either, partly because most countries are still using cash more than the UK so it hasn't become an issue.

Our research suggests most retailers and merchants want to accept whatever form of payment consumers want to use – cash or card – as long as it's affordable. We take the view that the biggest driver of cash acceptance is the cost of handling cash, not the law. So the best way we can maintain cash acceptance is to keep the cost of cash handling low. However, if it seemed that access to key services (like prescriptions) was being harmed by a lack of cash access, we'd recommend considering legislation.

Also, the legal position is unclear in many countries. In Finland and the Netherlands, EU legislation requires that Euro banknotes and coins have legal tender status. But Euro area member states take different views on the implications of legal tender status for the acceptance of cash, and there haven't been any European Court of Justice rulings on this. The European Commission is of the view that

⁵¹ Access to Cash survey of 2,000 nationally representative UK consumers conducted in November 2018

⁵² <https://www.chainstoreage.com/finance-0/measure-to-ban-cashless-stores-advances-in-new-jersey/>

⁵³ <https://www.theguardian.com/business/2018/nov/28/legislation-bans-cashless-business-policy-discrimination>

Finally, cash acceptance isn't just about retailers – it's also about government services, utilities, hospitals etc. Reports that local authorities are stopping accepting cash are worrying, especially as those who rely on their services are most likely to be cash users.⁵⁴ And it was hospitals in Sweden announcing that they were no longer accepting cash which prompted a public outcry, leading to a cross-party review of the issue.

Our view is that that while cash is needed it should be widely accepted – not least for essential or monopoly services – and shouldn't be subject to discriminatory charging. While we are sceptical that legislation requiring all retailers in the UK to accept

cash would be sensible or practical, we do believe that monopoly or essential services should bear an obligation to do so. Accepting cash can also be done innovatively, and there are services which support this, such as PayPoint and PayZone, which allow consumers to pay their utility and other bills in cash.

Businesses have a social responsibility too. It may make commercial sense to stop serving 5% of the customer base who are the poorest – and we know the cash dependent are often the poorest - but this is a bad answer for society. As a society and as an economy we need to recognise that stopping accepting cash isn't just a commercial choice: it has societal implications, and may cause real detriment.



We believe that the biggest driver of cash acceptance is the cost of handling cash, not the law.

Natalie Ceeney, Chair, Access to Cash Review



The myth of Legal Tender

Many people assume there's a right to pay for goods or services in cash. This isn't the case in the UK where Legal Tender has a very narrow and technical meaning, which relates to settling debts. It means that if you are in debt to someone, you can't be sued for non-payment if you offer full payment of your debts in legal tender.

What is classed as legal tender also varies throughout the UK. In England and Wales, legal tender is Royal Mint coins and Bank of England notes. In Scotland and Northern Ireland only Royal Mint coins are legal tender. Throughout the UK, there are also restrictions when using the lower value coins as legal tender. For example, 1p and 2p coins only count as legal tender for any amount up to 20p.⁵⁵



All businesses which have face-to-face contact with customers should be legally obliged to accept cash for payment, up to £100.

Ron Delnevo, Debbie Smyth - Industry Experts



54 <https://www.dailymail.co.uk/news/article-6322579/Councils-England-refuse-cash-cheques-taxes-fines.html>
55 <https://edu.bankofengland.co.uk/knowledgebank/what-is-legal-tender/>



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

If the key to cash acceptance continuing is to keep the costs of cash handling low, what does this mean in practice?

The costs of handling cash for retailers, charities, merchants and service providers – anyone who gets paid for goods or services in cash – include costs to deposit cash at the bank, but they are wider than that. The costs to a merchant include the time and effort to travel to the bank, costs of paying staff to cash up at the end of the day, costs of insurance, and more.

The problem is that many of these costs are rising, not falling. As cash use has gone down, the unit costs of cash handling have gone up for banks, and many of these costs have been passed on. As bank branches have closed, journey times have risen, along with staff costs and fuel costs. This has led many merchants to hold cash for longer, raising insurance costs. As cash use falls, we need to change the underlying infrastructure costs or these unit costs to merchants will keep rising.

For most merchants, there are two big issues driving up cash handling costs. One is bank charges – and the only realistic and sustainable way of keeping these low is to reduce the costs that banks incur to run the infrastructure. The other is distance and ease of deposit facilities. Here we can be more innovative.

Many merchants don't know that all Post Office branches will take deposits up to £2,000 – and that the Post Office is investing in automated deposit machines to avoid queuing. And in other countries there are 'deposit taking taking ATMs': ATMs which also accept cash deposits. In the UK, these are limited to operating from within bank branches, only for the bank's own customers, but it would be feasible to roll out these deposit taking ATMs far more widely across the UK. Independent ATM operators (IADs) tell us that they are ready and willing to start deploying the terminals – they just need banks to agree to it.

Cashless Shops

When people come across a cashless café, restaurant or pub for the first time they can be surprised that they don't have a right to use cash in the UK, and that cash acceptance is determined by the party offering the service. Then it's up to the customer to decide whether they're prepared to pay by the requested method.

However, we can only maintain cash use if it's widely accepted. If shops and service providers stop accepting cash, the economics of processing it will collapse. This will cause a domino effect where the costs for the remaining cash businesses climbs and cash use quickly fades. This will leave those who rely on cash excluded from those services.

Paying bills in cash

For services where paying cash is difficult, those services need to be encouraged to partner with an intermediary which lets consumers keep paying cash.

This need to pay cash led to the creation of PayPoint(over 50,000 locations⁵⁶) and PayZone (over 15,000 locations⁵⁷). These services help turn convenience stores into service hubs and help people pay bills in cash. They can also offer extra services like parcel delivery and collection, and making and receiving payments (like cash from benefits or refunds from utilities, such as electricity and water bills). These services can be a vital community asset.

This sort of innovative local solution needs to be encouraged and supported. All larger service providers (utilities, councils, government services) should be encouraged to partner with services like these if they don't accept cash directly.



When depositing cash, it is only free if you pay in over a certain threshold which may not be possible for small businesses.



Federation of Small Businesses,
Bournemouth



If, as an operator you pride yourself on your ethical responsibility, perhaps the most responsible thing you can do is to work proactively to continue to accept cash.



BigHospitality.co.uk⁵⁸



With bank closures, accepting cash is a pain. I'll go from the office, pick up a colleague with cash, drive them to the bank and probably queue for over an hour to deposit our cash collections and income. The two closest banks have closed so depositing takes two people well over an hour, plus we have to stand in the street with a couple of thousand pounds on us. If we get it collected it's £15 a time.



Cancer Research Wales, Cardiff



A lot of businesses are now breaching their insurance obligations because they are holding more cash on their premises than they are insured to do. This is because bank closures mean businesses hold on to cash for longer before making the trip.



The Salvation Army, Cardiff

How can we keep the costs of the cash infrastructure affordable?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Cash costs the UK around £5bn a year and there is potential for savings across both the retail and wholesale sectors. Maintaining cash access and acceptance as cash volumes decline means doing things smarter, and at lower cost.

Most consumers have no visibility of wholesale cash processing – or how ATMs are filled, maintained and managed. Cash centres are necessarily discreet, and the armoured security vans on our roads and high streets are usually the only sign of a complex web of processing and organisations. Without it, though, how would the banknote you spend in a shop find its way into a working ATM?

However, as we hope we have demonstrated, if we want to address consumer access to cash, and consumer cash acceptance, we need to look to one of the root issues of rising cash costs, namely the costs of running a cash infrastructure designed for a world of high cash volumes, which is relatively fixed costs, despite cash volumes falling.

Until now, cash infrastructure has largely been run by commercial organisations for commercial purposes. But our view is that, cash access and acceptance will need to be seen as a utility: an essential function of maintaining an inclusive society, even if it doesn't make much commercial profit.

There are different ways for commercial organisations to keep costs down. While we've seen the issues around closing services such as ATMs and Bank Branches, another way to approach this is to collaborate to maintain coverage while reducing costs. In the Nordics and Netherlands, where cash use has reduced quickly, there have been examples of exactly this sort of commercial collaboration which the UK should consider.

Finland and Sweden

In Finland⁵⁹ and Sweden, ATM networks have integrated into one single network of jointly owned ATMs, and there's more willingness to share deposit facilities.

In Finland, while most night vaults and with deposit ATMs are still operated by the banks themselves, over 100 night safes and over 150 Cash Recycling Machines (CRMs) are operated by Automatia, and can be used by customers of any of Automatia's customer banks. As Automatia adds CRMs, there's a gradual shift towards deposit facilities that can be used by customers of all major Finnish banks.

In Sweden,⁶⁰ a similar development has also started. Bankomat now operates more than 250 CRMs which can be used by clients from three of the five major banks. Some of the night safes are also universally available.

Norway

In Norway, Nokas⁶¹ was founded in 2001 as a cooperative structure by the Central Bank and several commercial and savings banks. It has developed into a full-fledged cash management and CIT company, active in several countries in Northern Europe. In Norway, Nokas transport retailers and processes cash for commercial banks and retailers, and manages private depots for commercial banks. It also manages four of the Central Bank's five cash depots and owns and operates 300 non-bank ATMs in Norway and over 500 in Sweden.



The Netherlands

In May 2017, the three largest Dutch banks announced they would bring their ATMs together in a joint network over three years. Management of the joint ATMs and the underlying processes is to be transferred to Geldservice Nederland (GSN), the organisation responsible for processing and distributing cash for the major banks since 2011.⁶²

The four relevant parties endorsed their agreement in mid-November 2017. The reasons for the establishment of GSN were to make efficiency gains, rationalize the ATM network, and help the major banks to continue providing cash at a reasonable cost.

⁶² <https://www.bankingtech.com/2017/05/abn-amro-and-ing-lead-charge-for-dutch-atm-survival/>

How could the wholesale cash infrastructure be improved?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Redesigning the UK's wholesale note and coin infrastructure is key to keeping the whole of the UK's cash system affordable.

The costs of the wholesale cash infrastructure are high - £2bn out of the total cost of £5bn. It's complex too. There are many processing centres and a complex web of deliveries and processing, all done by different commercial companies with different functions and services. Because many of these costs are fixed, simple economics says that as cash usage levels halve, unit costs are likely rise significantly – and these costs will be passed on. So, it's essential to find ways to keep costs down.

An analysis of our wholesale note and coin infrastructure shows the opportunities for reducing cost without having any negative impact on service levels. Because our wholesale cash infrastructure has been run in an age when cash was commercially attractive, some assets are duplicated, and double-handling and redundancy are built-in. In short, if we had a blank sheet of paper and designed a wholesale cash infrastructure for the UK now, we'd design something simpler, with fewer buildings, less duplication – and significantly lower cost. Models from overseas suggest that an optimised utility model for wholesale cash could reduce costs by up to a third. Cost reductions at this level feel like a prize worth working for, even after the inevitable implementation costs. Such cost reductions would help keep cash sustainable as volumes fall.

This whole process for notes and coins therefore needs a major review to ensure the cash infrastructure is sustainable and can work for the next 15 years and beyond. The system must be efficient, effective, resilient and sustainable. Any review needs to include the views of the many commercial players and should consider notes and coins. If anything, the issues facing coin are more pressing, but they're both essential to sustain cash overall.

As we have noted, some other countries (such as the Nordics) have already re-structured their wholesale cash supply chains into utility models while others (such as the Netherlands) are in the process of doing so. In these countries, major financial institutions and other stakeholders have worked with regulators to find a shared solution which secures cash as a payment mechanism for those who continue to use it, contributes to resilience in the financial system, and ensures that cash is provided efficiently.

Positively, similar discussions have already started in the UK. The UK financial services industry has already begun an initial discovery piece of work to understand the impact of a decline in cash usage across the wholesale infrastructure supply chain, and explore possible options to maintain sustainability. This is valuable preliminary work that should be developed and accelerated. The work suggests opportunities in a number of areas, including consolidation of infrastructure and its management. It seems clear that automation and standardisation would both save costs and support the sustainability, resilience and integrity of cash as a method of payment at much lower transaction volumes.

The financial services industry believes that this points to an 'end state' for the cash supply chain that could rationalise significantly the infrastructure via automation and standardisation, and that this would support the sustainability, resilience and integrity of cash as a method of payment at much lower transaction volumes. The period over which this 'end state' vision could be realised will be influenced by the pace at which cash usage declines and the extent to which the industry cooperates now to initiate the restructuring and rationalisation process. In the view of the panel this is work that should be strongly encouraged.

One way to achieve the restructuring and rationalisation of the supply chain would require a much more joined-up approach through some sort of industry 'utility'. It is possible to imagine a range of different options – with different models around who owns the infrastructure, who operates it and the degree of competition for each layer. A simple option would be a single bank or commercially-owned entity providing cash processing and cash in transit (CIT). More complex models are closer to the current market, with a range of ownership structures, operations and competitive dynamics in both cash processing and CIT. All these models have the potential for greater coordination on data and standards. Each option also brings different benefits and poses different transition risks and issues. Evaluation of the best potential future model will require wide engagement with regulators and stakeholders – and in much more detail than has been done so far – to determine the best way to future-proof the wholesale cash infrastructure supply chain.



**£2 billion
cost**



**Access to
cash**



**The acceptance
of cash**



**The cash
infrastructure**



**Digital payments
which work for
everyone**

Bancomat - Sweden

In Sweden, collaboration between banks was a key factor in reducing the overall costs of access to cash and deployment of payment innovation.⁶³

The five major commercial banks first transferred their cash management and ATMs to a joint venture called Bankomat in 2013. Bankomat outsources operational activities like transportation, sorting and ATM servicing to the traditional cash in transit companies, as well as running cash depots. The same five banks also cooperated in the joint venture Bankernas Depo AB (BDB), which trades cash with the central bank and was merged with Bankomat in 2016. BDB receives interest compensation from the Central Bank for its banknote stocks.

It also provides a mechanism to support ATMs in areas of low footfall, and allows cost saving and cross-subsidisation of unprofitable ATMs in a business which is cost-driven, rather than revenue generating.

Attacking the cost of cash - McKinsey⁶⁴

In their 2018 report, McKinsey noted that while cards and mobile payments are gradually pushing the use of cash downward, especially in countries like the UK, cash is not going away. People still rely on cash for a broad range of payment needs and will continue to do so. What's more, cash costs account for five to ten percent of bank operating costs and are rising in absolute terms in most markets - even while usage drops.

There are three main levers banks could use to manage cash costs: making operations lean, rightsizing networks, and national pooling of resources. These actions could result in big payoffs both in markets where the use of cash is in steep decline and in those where consumers and businesses continue to rely heavily on cash. Looking at the first lever - making operations lean - McKinsey recommended improving cash handling, transportation, sorting and maintenance, and reducing duplication. Even in 'vanguard markets' like the UK, they concluded these actions would target 75% of cash operation costs.

⁶³ <https://bankomat.se/about-us/>

⁶⁴ <https://www.mckinsey.com/industries/financial-services/our-insights/attacking-the-cost-of-cash>

Current duplication, or single points of failure?

Double handling



In the current model, 'surplus' players in the market will sell their extra cash to 'deficit' players on a weekly basis. At present, this results in multiple handoffs of stock (i.e. notes or coins) between cash centres both within the same region of the UK, and outside as notes (and coins) require validation (counting or weighing) and re-validation each time they are moved, to ensure integrity.

Cash is therefore currently handled 2.5 times more on average than it would be optimally. The cost of this handling and counting is spread across all participating members. This significantly increases operation costs, as well as taking longer to meet demand from retailers and consumers for notes and coins.

Source: Cash Services

Transport overlap



There are large numbers of specialist security vans operated by commercial organisations supplying ATMs, banks, shops and Post Offices across the UK. As volumes drop and less cash needs to be moved, this presents a challenge. Potentially, we will have a similar number of journeys, meaning the same cost, but for half as much cash. This could make the service commercially unviable. There is scope to rationalize and make security van trips more efficient and suitable. Are there also opportunities to establish local recycling networks that don't require cash to be transported from one end of the country to the other?

Duplication of infrastructure



Cash centres are large capital-intensive buildings. There are over 30 around the country plus a further 70 cash depots. This is a lot more than many experts believe we need. We need the right number to ensure national coverage and allow for the efficient redistribution of 'surplus cash' (largely in the south of the country) to 'deficit areas' (more commonly in the north). As we move to a lower cash economy, we need to make sure we're making the most effective and efficient use of this infrastructure – and that might mean we need less infrastructure.

Single points of failure



The UK's payments infrastructure has the potential for single points of failure – as the digital outages in 2018 showed (VISA in June, and TSB in April). Any changes to cash or other payment systems need careful consideration to ensure that alternative payments systems can continue to provide backup.

Consumers haven't been affected by a major, prolonged cash service failure for many years. However, the concentration at certain points of the supply chain could be a cause for concern. In declining markets, a collaborative approach to service and support is more important than ever - so that those customers who rely on cash can maintain access to it, just as those customers who rely on cards need to do. The cash industry also needs to keep taking a joined-up approach to resilience and incident management, and stress test it regularly.



Access to
cash



The acceptance
of cash



The cash
infrastructure



Digital payments
which work for
everyone



Sweden will probably become cashless in 3-5 years. If we don't do anything we are looking at a future where money will be spontaneously privatised.

Cecilia Skingsley, Riksbank deputy



Cash as contingency?

Cash plays, and will continue to play, a key role as a contingency for both individual consumers and for UK society.

Most of us take it for granted that we can always pay cash for goods and services. 97% of us still carry cash, including many of us who prefer digital payments. 55% of us do so to provide peace of mind in case we can't pay for something with a debit or credit card. 85% of us also keep some cash at home. For 21% of us this is in case the IT systems go down, or we visit somewhere that doesn't accept cards.⁶⁵

Cash isn't just a contingency for consumers who keep cash 'just in case'. It's also a systemic contingency for IT systems.

Recent systems failures have been reasonably localised or short-term, such as the VISA outage in June 2018⁶⁶ or the BP outage in July,⁶⁷ when customers were forced to rely on the cash they were carrying or on nearby ATMs. At this level, the current infrastructure worked well and there was only a small amount of disruption. Many petrol stations, supermarkets and convenience stores have ATMs, and the additional cash withdrawn during these short incidents was not enough to empty the machines.

A more serious incident would, however, begin to put strain on the system. The ATM industry puts a lot of time and effort into 'market wide exercises' to rehearse and practise keeping ATMs filled and cash available to consumers. The ATM network also has significant spare capacity. On the busiest day of the year for the ATM network (usually just before Christmas), £700m can be withdrawn in a single day through around eight million withdrawals, excluding the spare cash left in the ATMs at the end of day. This is around twice the normal daily average: about £350m and five million withdrawals. The system can also cope with very high transaction peaks and Vocalink, who process all LINK transactions, have recorded a peak of over 22,000 transactions a minute.

If there were a sustained systems outage, the challenge would be filling ATMs quickly enough to meet the extra demand when consumers couldn't use card payments. Cash Service recently held an exercise to look at this, and even with a highly unlikely series of circumstances they found there was enough cash in the system to sustain the ATM network for four to five days.

Cash is also a vital part of managing catastrophic events. After the Grenfell Tower fire, the Post Office used a mobile branch to dispense cash to those who needed immediate relief to buy food, clothing, transport etc. Internationally, cash is often used during the first stage of relief for disasters like earthquakes, floods and wildfires.⁶⁸ However, while cash can usually be spent with no underlying infrastructure or support, (one of its values in disaster relief) ATMs need power and telecommunications. While some ATMs (or the premises they're in) will have back-up generators, many will not – and they all rely on a communications link back to the cardholder's bank. While there are multiple backups and contingencies, UK ATMs can't operate if they aren't online: they may have Stand-in Processing (STIP) values, below which the transaction may be authorised locally. There are also the old paper 'flick-flack' card terminals: they didn't need a connection, but they did demand trust that the payment would be authorised later.

An even higher level of contingency is cash's status as a store of value, and as a last resort. Cash has value in its own right and, critically, is issued by a central bank. In England this is the Bank of England, and for Scottish and Northern Irish notes it's covered to the same value by cash held at the Bank of England. There's a security and feeling of reliability from 'I promise to pay the bearer' which guarantees a banknote forever.

Even though bank deposits may be accessible by card or online, and are also protected by the Financial Services Compensation Scheme (FSCS) up to a limit, they don't provide the same contingency as cash. A bank in trouble may limit the amount of cash customers can withdraw to protect supplies, and this may add to customers' unease. This can lead to a 'run on a bank' – like the queues outside Northern Rock branches back in 2008. This was despite the fact most customers queuing probably had savings below the FSCS limit, which meant they were 'safe'.

⁶⁵ Access to Cash Review research

⁶⁶ <https://www.visaeurope.com/newsroom/news/visa-service-disruption>

⁶⁷ <https://www.bbc.co.uk/news/business-44759913>

⁶⁸ <https://www.cidl.org/how-disaster-relief-works/monetary-contributions-work-bestwhy-cash-is-best/#.XECysM3LeUk>

How do we make digital payments work for everyone?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Many of us take recent innovations in digital payments for granted. We can now buy almost anything online, check our bank balance and buy a coffee using the smartphones that 87% of us own or have access to.⁶⁹ We can book cinema tickets online, use boarding passes on our phones and tap into the London Underground and buses without a second thought. But for those without access to digital or even banking services, these opportunities aren't available.

FinTech – financial technology – is one of the fastest growing sectors of the UK economy. FinTech innovation could help with financial inclusion, giving all consumers the tools to function in a digital economy. As we noted in Chapter 3 though, commercial developments tend to prioritise profitable, easy-to-find early adopters and the mass market, or those with the money to pay for developments. Those with the greatest needs and who stand to benefit most from moving away from cash may be late adopters, and have the least time and money to invest in new solutions – even if they would help. And more – solutions need to be designed in conjunction with those who need them, or they are unlikely to meet the right needs. Even if the tools and technology are there, and devices like smartphone can create real opportunities, it takes work to meet the needs of all consumers.

We see a real risk of commercial companies applying the 80:20 rule: once 80% of people have adopted a technology, there's little commercial incentive to look after the 20% who have been left behind. And even if FinTech companies develop innovative solutions for the 20%, there is a risk that their funders won't fund development, or large banking customers won't want to buy them, because the market need is too low. That's not good enough: if these people can't follow, they'll be cut off from the economic and social benefits everyone else enjoys.

As we noted in our earlier chapters, those who may be left behind won't be just the current older generation. This is not a problem which will disappear over time. We all age, and the challenges which older people or those with impairments currently encounter will be almost everyone's sooner or later. We need intelligent, targeted solutions which are designed with inclusion and access in mind – and making products and services well-designed and simple-to-use is a benefit to everyone. The UK has a thriving FinTech sector which can support targeted innovation – but it will need regulatory or government direction, industry sponsorship and market stimulation to target those who are the least affluent and least commercially attractive, but most in need.

If we want everyone to be able to make digital payments, there's much to do.

Firstly, we need the right regulatory drive and incentives to make sure that everyone has access to the basics, and that payment products serve everyone's needs. For example, 1.3m consumers still don't have a bank account. The FCA and HM Treasury are working on this, but in an era where consumers may have no choice but to pay digitally it needs to be a core policy objective.

Secondly, services need to be designed to be inclusive. They can't exclude those with impairments or make assumptions about what consumers want and need. Better usability makes good business sense: experience has shown that inclusive product design works for everyone, making it better for all users.

This needs collaboration between regulators and providers and can be complex: for example, not all innovators want their products to be offered by all the major banks. And not all banks want the cost of offering services to everyone – some may be looking for exclusive products or unique selling points. However, there is ample precedent – text message alerts if you've gone overdrawn are now universal. In fact, many products and services only really work when they become ubiquitous.

Thirdly, we also want commercial organisations to play their part, and we want retailers to be thoughtful as they go digital. In practice, that might mean partnering with service providers like PayPoint and PayZone so that cash-dependent consumers aren't disadvantaged, or ensuring that the transition to digital doesn't leave customers behind.



Digital innovation



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

We already have strong regulator-driven mechanisms to encourage digital innovation

An unusual aspect of the Financial Conduct Authority (the FCA)'s ⁷⁰ role is that it has a competition mandate. It has interpreted this mandate to encourage digital innovation as a way of incentivising and facilitating the development of services which can better serve consumers. The FCA's approach has been widely admired and copied globally, and offers a potentially strong mechanism for supporting the development of the innovation needed to make digital payments possible for everyone.

In addition, initiatives by government, by other regulators and by banks and building societies have also been used recently to encourage innovation to support the more excluded. These also offer insight into future options for making digital payments possible for everyone.



Any solution would need to be presented in an easy-to-use platform and designed for and by the people that will use it.

Citizens Advice Scotland



Innovate



'Innovate' was launched by the FCA in 2014. Its purpose is to encourage innovation in the interests of consumers. That includes clarifying regulatory expectations, rules and guidance, and considering policy changes that are necessary to allow businesses to innovate in the interest of consumers. The FCA identified that there was less risk to open markets to innovation than not to.⁷¹

Innovate offer a range of services designed to support firms developing innovative products and services, and to gather insight that helps us to shape the regulatory environment and market in an innovation-friendly manner. This includes their regulatory sandbox, which allows businesses to test innovative products, services, business models and delivery mechanisms in the market with real consumers, whilst ensuring that appropriate consumer protections are in place. The FCA also offers direct support and regulatory feedback. Innovate's support will be essential to giving consumers the right digital payment solutions.

Green FinTech Challenge



Launched by the FCA, this is aimed at firms developing products or services that support the UK's transition to a greener economy, where they need specific regulatory support to bring their proposition to market.

The objective is a financial services market that works well when responding to the challenges of climate change, as well as the potential opportunities. The FCA launched the Green FinTech Challenge to support innovation and growth in the Green Finance sector as part of the government's Green GB Week.

Through this initiative the FCA encouraged firms who require specific regulatory support, and meet the criteria, to apply to join the Green FinTech Challenge. It was open to startups, incumbents and technology providers. The FCA expects to announce the companies they've chosen.⁷²

70 <https://www.fca.org.uk/news/speeches/overview-competition-fca>

71 <https://www.fca.org.uk/firms/fca-innovate>

72 <https://www.fca.org.uk/firms/fca-innovate/fintech-challenge>

Rent Recognition Challenge

The Rent Recognition Challenge was launched in December 2017 to tackle the growing number

of people around the UK who can't get onto the property ladder. The challenge tasks entrepreneurs with creating ways to record and share rent payment data – which can help renters get a credit rating and secure a mortgage.

It's important because rent payment histories are routinely ignored in credit scores. This means that when people apply for a mortgage, banks won't know if they've been paying rent on time, without fail, for several years at a time. Three government-backed startups - CreditLadder, Bud and RentalStep – have each won a share of £2 million through this challenge.

John Glen, Economic Secretary to the Treasury, said, 'Monthly rent is often the biggest expense that people face. Yet most lenders are unable to take it into account when working up a credit score. Three pioneering startups have found a solution, and we're giving them the investment and support they need to help millions of renters across the country achieve their dream of owning a home.'



Open Banking for Good

Launched by the Nationwide Building Society, Open Banking for Good (OB4G),



brings organisations and people together to create and scale solutions around Open Banking to improve financial capability in the UK.⁷³

Nationwide Building Society has worked with 17 charities and organisations to identify three key challenges:

- Income and expenditure
- Income smoothing
- Money management and help

The programme calls on FinTechs and other organisations to find ideas that address these challenges, and so improve the lives of the financially-squeezed with Open Banking technology. Nationwide has made £3 million available to the scheme.



There is an opportunity for new tech-enabled, competitive access-to-cash solutions to be adopted over the next 5 years.



Emerging Payments Association

Overdraft text and mobile alerts



The CMA and the FCA have introduced new rules that require banks and building societies to automatically enrol consumers into overdraft and refused payment alerts. Since February 2018, banks and building societies have been required to alert people by text message or push notification if they are at risk of incurring unarranged overdraft or refused payment charges. From December 2019, this will extend to arranged overdraft use.⁷⁴

⁷³ <https://www.openbankingforgood.co.uk/>

⁷⁴ <https://www.gov.uk/government/news/new-overdraft-alerts-as-cma-banking-rules-come-into-force>



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Transport for London*

As well as moving people around by tube, bus, train and tram, Transport for London (TFL) is a major micropayments business. It handles a huge volume of low value payments – millions every day. As part of this review, we explored with TFL what efforts they'd gone to in order to be inclusive as they'd moved away from cash.

History and background

There's a very long history of moving away from cash in public transport, starting with the birth of modern ticketing on buses in the 1870s. The desire to shift from cash is down to efficiency and cost, particularly for buses.

Since 1956, London has seen a wide range of initiatives – including cheaper advance tickets (Rovers), physical ticketing machines at bus stops or on buses, and conductors. By 2003, this meant that cash was only being used for 30% of all journeys.

Oyster was the next big breakthrough. Launched in 2003, Oyster cards effectively created the first contactless payment mechanism. They let consumers charge up a store of value and use that to pay for travel. This was coupled with a range of interventions to encourage people to trust Oyster, including daily journey caps and – in 2006 – price differentials to incentivise Oyster use. This took cash usage on buses from 30% in 2003 to 7.8% in 2006.

Targeting cash usage

Transport for London seriously considered removing cash from buses entirely once its use had dropped to 2%, which happened in 2010/11. However, there was anxiety within TFL that 2% still represented too many people, so they commissioned research into why people used cash on buses.

They found that this 2% broadly fell into three groups:

- Those who had just forgotten their Oyster card.
- Very occasional bus users - including tourists – who didn't know or want to learn how to use the system.
- Those who were not prepared to pay without cash.

Work was done to explore how to help these groups, and one of the biggest insights was that contactless cards would help the second and third groups. TFL started accepting contactless cards as well as Oyster on buses in 2012, which took cash usage down to 0.6%.

Removal of cash

TFL now felt that they could be bold – even though they knew there were users in this 0.6% who would be disadvantaged. TFL trained staff to reinforce their customer vulnerability policy, which means bus drivers should always let the vulnerable on, and issue a notice asking them to pay later. With the drivers trained, cash use was abolished. They issued more 'vulnerability notices' as drivers found some people didn't have cash, but still needed to use buses. While TFL started receiving three to four complaints a day about buses not accepting cash payments, this replaced the three to four complaints a day they had received about bus drivers not having the right change.

Learnings and observations:

There are different views as to whether it is 'right' for a core transport infrastructure to go cashless. But what is clear is that, in making the decision, TFL's detailed and insight-led analysis of why people were using cash was critically important to stop people being left behind. The reasons people used cash on buses was different from trains or the tube. With specific insight and the right actions, changes can be made without causing unacceptable consumer detriment. But this doesn't happen automatically: detailed procedures, training and planning are still needed.



Industry needs to ensure that new ways to meet those needs are developed and made available to those users as the usage of cash will no longer be economically viable.

Good innovation looks to meet the needs of users in better ways.



Yorkshire Building Society Group



Is intervention necessary?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Until recently, access to cash hasn't been a significant issue for the UK. Cash usage was rising, as were ATM numbers and use and there were commercial incentives to enter or stay in the various cash distribution markets. The UK's cash industry – from wholesale to ATMs – was competitive, effective and met consumers' and small businesses needs.

We can no longer take comfort that cash will continue to work well and remain affordable.

As we've already discussed, aside from Post Offices, cash access providers have no obligations to support cash, nor are there obligations for cash to be accepted. Commercial pressures are beginning to have a negative effect, which will only get worse as cash demand and usage fall.

Commercial organisations may act in their own interest, even when it's to the detriment of society as a whole. Without intervention, market forces will lead to a removal of services and a lack of coordinated action which may be difficult to stop when it has started. We see this in the high street retail market as brand after brand announces rationalisation plans for their networks.

The problem is that a purely market-driven approach may lead to a poor outcome for society, when a commercially viable approach could have been found.

Consider branch access in a small town. There may be three bank branches, but not enough business to justify each one remaining. With just a third of the potential business each, they close swiftly, one after the other – even though the combined demand may be enough to keep one open. At present, banks don't offer services like deposit ATMs and counter deposits to other banks' customers – so if you don't bank with the only remaining bank, you can't use it anyway.

Having the last remaining bank in a community can bring its own challenges. There are often campaigns and calls to save a town's last bank, and for that brand, if they decide to close, the surrounding publicity may be entirely negative – even if competitors closed to little fuss shortly beforehand. Is it therefore better to be an early leaver and avoid the publicity of being the last bank to leave a community? There's a risk of a 'rush to the exit' if none of the banks want to be the last.

While invisible to consumers, the wholesale market is subject to similar pressures. There's a risk that organisations try to get out early to avoid being left until last and potentially forced to do something or provide services they don't want to.

These actions aren't malicious: they're economically rational decisions within the constraints, markets and conditions they operate in. These organisations have found it difficult to share services and facilities, and there are competition constraints to stop them getting together to find the best solution.

We saw in Sweden that without regulatory intervention there's a real risk of a 'dash from cash'. And once it starts, you can't turn it around.



What advice do I have for the UK? Look at your cash system now and be prepared to regulate, while you have time. When cash levels get too low, it will be too late to put back in place systems which have been dismantled.

Cecilia Skingsley, Deputy Governor, Sveriges Riksbank.



Regulation in other sectors with similar challenges

The issues we are facing in cash aren't unique to this sector.

There are other sectors in the UK where services are provided largely or entirely by private sector operators, but there is an economic need for coordination, and yet where such discussions could be seen as a potential breach of competition law.

These examples illustrate potential regulatory models for handling some of the challenges we face in keeping the cash system affordable and universal.

Telecommunications: mobile mast and site sharing



To expand coverage, mobile operators used to simply install their own infrastructure and equipment, including antennae and masts. This isn't just expensive: it adds masts to the landscape and uses more energy to power the equipment. The problem is that too many masts can get built in areas which are profitable (high population density and not too rural) and fewer where less so, leaving black spots which are unprofitable for any single mobile operator, but where there may be a significant population needing a signal.⁷⁵

Ofcom started encouraging mobile network operators to share masts and sites where possible. Now applicants for Electronic Communications Code powers need to show they're willing to share their infrastructure with other operators. This has led to major networks agreeing to share their radio access networks to provide wider coverage to customers and to reduce network roll-out costs.⁷⁶

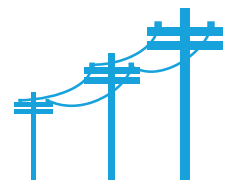
Local buses: multi-operator tickets



In 2011, the Competition Commission's local bus service investigation found that in many areas passengers were facing less frequent services and higher fares. The investigation identified several barriers to the entry and expansion of smaller operators. Bus frequency is a big factor in passengers' choice: smaller services running fewer journeys were less attractive to passengers. The lack of multi-operator ticket options added to the problem.⁷⁷

The Competition Commission recommended that bus companies use multi-operator ticketing schemes. In 2013, the Department for Transport issued guidance for local transport authorities on planning and implementing these services, including clarification on coordinating the commercial terms of multi-operator tickets without breaching competition law.

Energy networks: stakeholder workshops and working groups



The process for setting price controls in the energy sector is long and complex: these price controls determine how much investment is needed, innovation, reliability of the energy system and the energy prices for several years. This process needs an iterative approach where Ofgem's proposals are shared with a wide range of stakeholders, including all regulated network companies and other industry participants such as energy suppliers.⁷⁸

75 <https://www.ofcom.org.uk/spectrum/information/site-sharing>

76 <https://webarchive.nationalarchives.gov.uk/20140402200211/http://www.competition-commission.org.uk/ourwork/directory-of-all-inquiries/local-bus-services-market-investigation/final-report-and-appendices-glossary>

77 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/141874/multi-operator-ticketing-guidance.pdf

78 <https://www.ofgem.gov.uk/network-regulation-riio-model/network-price-controls-2021-riio-2/riio-2-events-seminars-and-workinggroups>

Have we got sufficient government and regulatory oversight?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

Cash has been around for a long time. No government has needed a policy on ‘cash’, and the regulatory oversight it’s needed has been mostly light touch. But as Britain goes increasingly cashless, new issues are emerging, raising new challenges. Cash is going to need more attention.

The UK government doesn’t currently have a policy on cash. There isn’t a clear government position on whether it would be good or bad if Britain went cashless. Is it important or not for large retailers or utility suppliers to accept cash? How important it is for all of the UK public to have access to cash? Should cash be protected because it provides resilience for digital failures? Should cash use should be protected, incentivised or disincentivised?

But nor do most governments. Cash has been such a core feature of our economy and society for generations, that few governments have needed to address these questions. Only as cash starts to disappear does this become an issue. But the evidence from other countries is that we cannot leave it too late to start debating these questions. In Sweden, it took hospitals announcing that they were no longer accepting cash to prompt a public outcry, leading to an all-party commission being established to develop recommendations. The consistent advice received from Sweden was to ‘act now – we left it too late – and we’re now having to put the brakes on’. As this review demonstrates, there are some core public policy questions posed by the decline in cash, which need to be addressed.

As far as public policy is concerned, any government will make choices about what it values. Our view is that, until everyone can use digital payments, it is essential to maintain a functional, efficient and cost-effective cash infrastructure, and to ensure that consumers can still access and pay with cash. Different governments will have different views about the desirability of a cashless society as an end state, or

about the desired pace of change. But we believe that maintaining cash while so many have no choice is essential public policy for any party. Positively, HM Treasury have already started to take a very close interest in cash, with a public consultation in 2018 on some key aspects of this debate.

Similarly, for a long time, the regulation and oversight of provision, distribution, use of and acceptance of cash has been mostly light-touch, with market forces being relied upon in most instances to provide consumers with what they want. The main exceptions are the design and manufacture of notes and coins (where the Treasury, the Bank of England, and the Royal Mint work together), and aspects of the ATM network operator LINK (where the PSR and the Bank of England have oversight).

There is no single regulator or central body responsible for cash itself. No one, for example, decides on requirements for availability of cash, acceptance of cash by merchants or banks, location of ATMs or bank branches, or charges for accessing or depositing cash.

These arrangements were satisfactory when cash usage was growing or stable - and market forces could be relied upon to maintain the service and resilience required because cash was a commercially attractive service. But as cash usage declines, issues are emerging. The evidence from Sweden is that the rapid decline of cash caused issues that regulators were simply not ready to handle, and to which they responded late. If market forces alone won’t give Britain the cash

infrastructure it needs, then we will need stronger and more coordinated regulatory intervention and oversight.

We believe that it is now time to look at cash as a core part of the UK's infrastructure, and not just as a commercial issue.

So what do we need? At the highest level, we need a clear government policy on cash – giving clarity about what consumers can expect, advocating the need to maintain cash for as long as it is needed – while also prioritising inclusive design of digital payments. Supporting and underpinning this we need a joined-up, systemic view of the cash system as a whole by our UK regulators and central bank (the Bank of England), analysing what's working and what's not, and taking appropriate action, with the right powers and tools to achieve positive outcomes.

Redesigning regulatory functions or creating new regulators takes time and can often prove a distraction from getting on with the job at hand. With a number of well-established regulators overseeing financial services as a whole, it may be sensible to start by refocusing the current regulatory approach. There's a range of legislation already in place to give these bodies oversight and regulatory powers, so we may not even need new legislation – at least, not immediately. If this approach doesn't work, we can move on to more forceful action and legislation in due course.

We'll also need individual regulators to oversee relevant parts of the system. And there's significant work ahead. We need to create a more cost effective, efficient and resilient wholesale infrastructure. To create innovation in digital payments so everyone can use them. To find a new model for 'guaranteeing' access to cash. And to make innovative models for cash access, and also for deposits.





**Access to
cash**



**The acceptance
of cash**



**The cash
infrastructure**



**Digital payments
which work for
everyone**

But responsibility doesn't just lie with government and regulators – it also lies with the organisations who supply, manage, distribute and handle cash, and who also develop, promote and enable digital payment solutions. The UK's cash infrastructure is provided by commercial organisations and directly paid for by the banks on behalf of their customers. The banks will need to play a key role in developing and then working with these new models for cash management. Joint working between the banks with regulatory and government support should be more efficient than a piecemeal approach, and should reduce the risk of systemic failures. This is not business as usual – this needs banks to step up and take a more proactive and responsible role in maintaining and innovating in cash supply, access and receipt. As the banks and LINK are directly regulated, this also gives regulators powerful levers to work with. And as far as new digital payment options go, banks have a critical role in supporting all of their customers through their technology.

Other organisations are also likely to have a role. In cash, these range from government owned entities (Royal Mint, Post Office) to the commercial (ATM deployers, retailer payment terminal providers, cash in transit firms, bulk cash centre operators, payment network infrastructure providers). For digital payments, there are a wide range of payment services developers, intermediaries and service providers. If our calls for innovation are also heeded, we would hope to see new

players supporting more innovative ways of managing, accessing and depositing cash, offering lower cost solutions to maintain an affordable infrastructure, as well as offering new digital solutions which work for everyone.



Sweden has today one of the most effective payment infrastructures in the world, in terms of cost, security and instant payments. Collaboration between banks in infrastructure solutions has been a key factor in the usage, development and deployment of payment innovation.



Rolf Carlström, Swedbank



Central government should work to make certain that developments concerning access to cash services continue to take place under controlled conditions to ensure that the cash needs of the general public and society are met.

Interim Report of the Rikstag, Committee of Inquiry June 2018



Who oversees and regulates payments today?



Access to cash



The acceptance of cash



The cash infrastructure



Digital payments which work for everyone

At the heart of today's regulatory and oversight system is HM Treasury. This government department takes the lead for the government on anything to do with financial services. This means it's best placed to set policy as it relates to cash and digital payments, and then to specify which regulators are involved and how.

The Treasury already has an in-depth understanding of cash and oversees the regulatory structure for financial services. It issued a call for evidence, called 'Cash and digital payments in the new economy' in early 2018, exploring a range of issues related to, but parallel to those we have been looking into. The Treasury is also well placed to keep an eye on the overall cash system and act if cash access doesn't develop as desired. However, issues relating to cash go wider than just financial services. For example, the Post Office is government-owned, and is a major player in cash access and SME cash deposit, but it is also regulated for its postal services, and its government owners have a wider set of goals than just financial services provision. Another example is connectivity (mobile and broadband) which currently presents one of the most significant barriers to many consumers being able to function digitally. And benefits policy, led by the Department of Work and Pensions, has its own approach to shifting benefits claimants to digital services. The Treasury is well positioned to work across government to coordinate on many of these issues, but we need to recognise that cash policy is, by its nature, an issue which requires cross government coordination.

The Bank of England's objectives are to maintain monetary and financial stability. It regulates and supervises a broad range of firms, including banks, insurers and payments systems. Its aim is to promote the safety and soundness of the firms it regulates. It also identifies and monitors risks in the financial system, and acts to remove or reduce them where necessary. In addition, it is the sole issuer of banknotes

in England and Wales, with an objective to maintain the availability, quality and authenticity of Bank of England banknotes. It focuses on wholesale distribution of banknotes and, through the Note Circulation Scheme, promotes the efficient circulation of genuine, good quality banknotes.

The Payment Systems Regulator (PSR) has the role of making payment systems work well for those that use them, including businesses and consumers. It also has objectives to promote competition and innovation in payment systems. One aspect of its role is to regulate LINK, the UK's main ATM network. The PSR is already overseeing LINK's plans to maintain a broad cash distribution network via free ATMs.

The aim of the **Financial Conduct Authority (FCA)** is to serve the public interest by improving the way financial markets work and how firms conduct their business. It uses its competition mandate within the financial services industry to encourage innovation in digital services, and encourages adoption of proven approaches that can help consumers benefit from new digital services or business models.

ATM Deposits – a missed opportunity?

There are 16,000 bank branch ATMs in the UK. Around 10,000 of these offer cheque deposit facilities, but only to their own customers. The idea of sharing these facilities was raised back in 2014 when Andrea Leadsom, then Economic Secretary to the Treasury, asked LINK and its members to develop this facility and allow cheque and even cash deposits across the LINK network. LINK responded by developing the appropriate message standards and rules for these transactions but couldn't persuade any of its members to let their customers use the service. With no ability to compel participation and no further regulatory interventions, this shared service still isn't being used.



The Treasury



'HM Treasury is the government's economic and finance ministry, maintaining control over public spending, setting the direction of the UK's economic policy and working to achieve strong and sustainable economic growth.'

The Treasury is responsible for financial services policy, including banking and financial services regulation, financial stability, and ensuring competitiveness in the City. The Treasury decides which payment systems, operators and participants are supervised by either the Payments System Regulator, the Bank of England, or both. It sets the parameters in which financial services regulators operate, usually backed by legislation. And as the lead government department for financial services, it will lead the development and implementation of government policy on cash, and take the lead on issues such as requirements to accept cash.

The Banking Act 2009 confers powers on the Treasury to designate a system as a 'recognised inter-bank payment system' if the Treasury is satisfied that 'any deficiencies in the design of the system or disruption of its operation, would be likely to threaten the stability of, or confidence in, the UK financial system, or to have serious consequences for business or other interests throughout the United Kingdom.'

The Royal Mint issues coins and the Bank of England issues banknotes on the Treasury's authority.

The three main regulators concerned with cash are:

<p style="text-align: center;">The Bank of England</p>  <p style="text-align: center;">BANK OF ENGLAND</p>	<p style="text-align: center;">The Payment Systems Regulator (PSR)</p> 	<p style="text-align: center;">The Financial Conduct Authority (FCA)</p> 
<p style="text-align: center;"><i>‘Promoting the good of the people of the United Kingdom by maintaining monetary and financial stability.’</i></p>	<p style="text-align: center;"><i>‘Making payment systems work well for those that use them.’</i></p>	<p style="text-align: center;"><i>‘We aim to make financial markets work well so that consumers get a fair deal.’</i></p>
<p>The Bank of England's objectives are to maintain monetary and financial stability. The Bank supervises financial market infrastructures, which provide functions that are critically important to the UK financial system, such as payment systems and clearing houses, including the LINK ATM Network. Through the Prudential Regulation Authority (PRA) it also regulates financial services firms. Its aim is to promote the safety and soundness of the firms it regulates. It also identifies and monitors risks in the financial system, and it takes action to remove or reduce them if necessary.</p> <p>The Bank of England is the issuer of banknotes in England and Wales, maintaining their availability, quality and authenticity. It has a particular focus on wholesale distribution of banknotes through the Note Circulation Scheme.</p> <p>Three banks in Scotland and four in Northern Ireland retain the right to issue their own banknotes.</p>	<p>The PSR has objectives to ensure that payment systems are operated and developed in a way that considers and promotes the interests of all the businesses and consumers that use them, and to promote effective competition and innovation.</p> <p>The PSR is responsible for the regulation of payment systems designated by HM Treasury. This includes the ATM network LINK.</p>	<p>The FCA's aim is to serve the public interest by improving the way financial markets work and how firms conduct their business, providing benefit to individuals, businesses, the economy, and so the wider public.</p> <p>The FCA regulates payment services in various ways including via the Second Payment Services Directive (PSD2). The FCA also supervises payment service providers, including banks and payment institutions, in relation to the conduct of business requirements.</p> <p>The FCA also has a competition mandate, which has been the driver for its work to encourage innovation in financial services, including in payments.</p>

The Review's approach in making recommendations

- **We have consulted widely, with over 120 organisations, and thousands of individual consumers. Our goal is not to make headlines but to develop solutions which work for Britain, and which we believe are easily implementable, at pace.**
- **We haven't compromised on our core finding – which is that everyone needs to have a safe, reliable method of payment which meets their needs.** This is not just core to the needs of all of us in society, it's also core to the functioning of the UK as an economy, and to the viability of local communities. Although the UK is adopting digital payments at pace, digital payments don't yet work for everyone. To avoid leaving people behind, we need to work to ensure that digital payments meet people's wider needs - while simultaneously keeping the cash economy viable in the meantime.
- **Cash needs to be viewed as a system, with decisions in one place leading to consequences elsewhere.** For example, as cash volumes reduce in a fixed-cost wholesale infrastructure, unit costs of cash handling go up. As these are passed onto consumers, much of the cost will be borne by businesses handling cash. The rising cost of cash will be likely to encourage digital-only approaches in shops, leading to exclusion. For this reason, our recommendations focus on all aspects of the cash value chain, and also call for joined-up thinking and action.
- **We need an innovative approach, not a call for the past or present to be preserved in aspic.** We should seek ways to make payments easier and more convenient, whether cash or digital, while considering new approaches to lower costs. We want to make all payments work better for everyone, and in a way which is affordable as the use of cash declines.
- **In this review, we haven't tried to solve all of society's ills.** Cash, and payments, are enablers of so many other other activities: getting paid, receiving benefits, paying rent and bills, socialising, saving, gambling, donating and more. In our research, we've inevitably heard about issues with the benefits system, of charity funding, and the grey or illegal economy. We have sought to keep our recommendations to within our scope – namely ensuring that people aren't left behind as we use cash less – but hope that some of our findings will support or shed light onto wider issues.
- **We want action.** For that reason, we haven't taken a sensationalist approach, but have called for actions we believe are practical and sensible. We have tried to seek ways of making our recommendations economically viable, recognising that most of the cash system is run commercially, and calling for actions which just cost money make them unlikely to happen. But at the same time, we haven't shied away from our principle of seeking to ensure that no one gets left behind.
- **We believe that this is urgent.** Not because the system is currently broken, but because it is creaking, with most participants and experts increasingly worried about the viability of the current model, and of the social consequences of uncontrolled market driven behaviour. As we discovered in Sweden, if the whole cash system is allowed to deteriorate too far, there is a point of no return and it can't be put back. However, if we take action now, we can shape a future which is both economically viable and in which no one gets left behind.

| Recommendations



1 – Guarantee access to cash



2 – Ensure cash remains widely accepted



3 – Create a more efficient, effective and resilient wholesale cash infrastructure



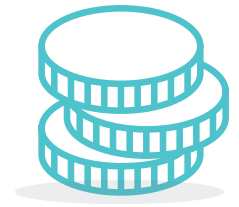
4 – Make digital payments an option for everyone



5 – Ensure joined-up oversight and regulation of cash

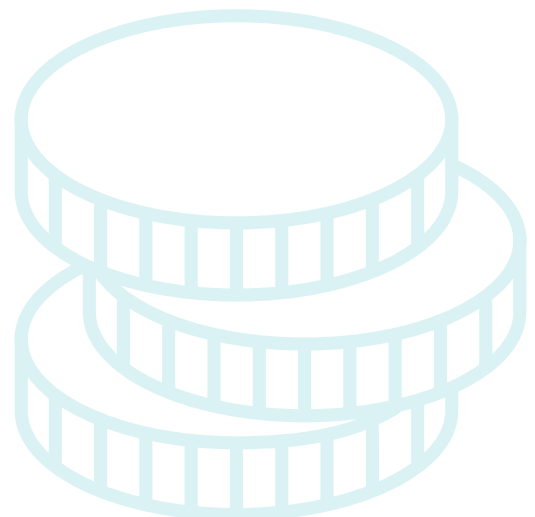
Recommendation 1

Guarantee access to cash

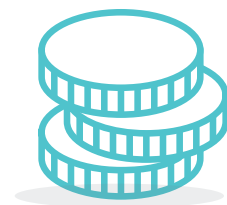


The Issue

- **The ability for people to make payments in a way which meets their needs is essential both for individuals and communities.** There is wider social and economic benefit in keeping local economies functional. At present, digital payments don't work for everyone, or for every location. For many, there will remain a need for cash for many years.
- **As cash usage declines, the economics of supporting cash access become problematic.** Increasing numbers of ATMs and bank branches become economically unviable, and close - leaving some areas at risk of no/low cash access. This will initially be around the margins – e.g. rural or deprived communities. As cash use declines further, the issue will become more widespread. But those who are already the most socially marginalised are most likely to be affected first.
- **Our current approach to providing cash access isn't place-based, but provider-based.** As a result, places aren't seen as ecosystems. They need to be, as both cash access and acceptance are critical to keep an economy functional. They also need to be able to change as communities change. For example, we know that the movement of a major employer in or out of a town can significantly affect the local economy. So whatever approach we take needs to shift with events.
- **We don't have a mechanism for commercial providers to collaborate to reduce costs.** Instead, the race has become to be the first to withdraw, or be the last service standing. A collaborative, agreed framework to enable services to still be provided where the economics are marginal or negative to a single provider, but where they remain important to society, is essential. Ideally such a model should be proactive, and enable services to remain viable (or change to become viable) and not just a 'step in' when something has failed.
- **The reality is that not all cash access will be commercially profitable,** But we also need to recognise that, to keep cash viable, the whole system costs of managing cash can't remain static as cash use declines. If we want to maintain cash access, we need to shift towards a more managed model, enabling commercials to be flexed to incentivise provision in less attractive areas. And at the same time, we need to innovate to reduce costs, while potentially even widening cash access. At present, 90% of cash access is through ATMs. Over time, there is no reason why we cannot be innovative in our thinking to increase consumer options while reducing costs, such as increasing the use of our existing high street and technology assets e.g. the Post Office, getting cash at convenience store counter terminals, or receiving cash through the post.
- **But at the same time, banks have a responsibility to support their customers through cash access.** Whatever changes are made to enable lower cost access, whether coordination to share costs or access through third parties (such as the Post Office or convenience stores), banks retain a core responsibility to ensure that their customers receive the access they need.



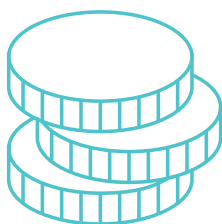
Guarantee access to cash



Our Recommendations

1. **A 'guarantee' for consumers and small businesses needs to be agreed around their rights to access cash** through wide consultation with stakeholders and consumer groups. We should also guarantee cash deposits for SMEs: this is critical to keeping local economies alive. There should be a regular (annual or biennial) review of both the 'guarantee' and the services being provided under it, so that as cash use declines further, services are not provided which are no longer being used by a sufficiently large number of people.
2. **A body (a regulated entity) is tasked with operating this guarantee.**
 - I. **This body is asked to 'step in' in the event of provision not meeting the guarantee** or if providers identify an area where there is a growing viability issue. This body will assess whether the place meets the criteria set, and if it does, it will assess the need of the place, and commission the service it requires – considering a wide range of options (e.g. local store cashback, ATM etc). The primary approach should be through using market means to commission (e.g. a set-up subsidy, with a higher interchange rate).
 - II. **This would be funded by the banks**, for example through interchange rates.
 - III. **Local councils should be enabled to 'bid'** to this body for local cash access and deposit facilities where they believe that their community needs services and meets the terms of the guarantee.
 - IV. **The focus should be on providing access to cash/depositing cash** – not just in the form of ATMs – encouraging innovation. In addition, where possible, we should seek to reduce the UK's dependence on one supplier.
3. **Innovation should be overtly encouraged in cash access** – including local cash recycling approaches, convenience store cashback, and by supporting cash by post as we do for foreign currency. Confidence in consumers' ongoing need for cash should help to encourage this innovation.
4. **No shift should be made away from free to use ATMs/ cash access being the norm.**

Initially this should be achieved through voluntary agreement, but with the ambition that regulators gain the statutory powers to enforce this approach through primary legislation at an appropriate point.



Who needs to take this forward?

This guarantee should be determined by the regulators, after consultation with both the banks and consumer groups.

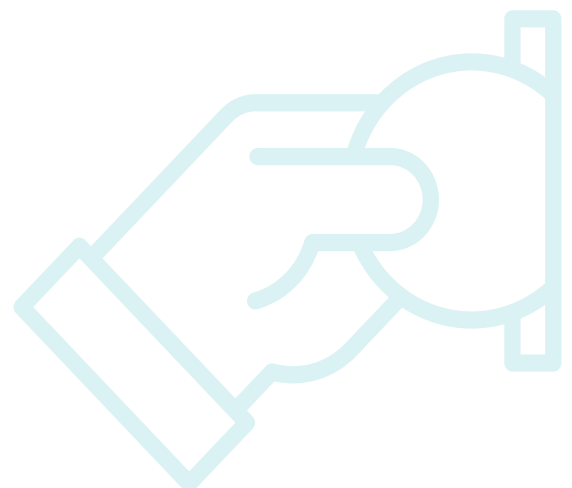
Recommendation 2

Ensure cash remains widely accepted



The Issue

- **Cash acceptance has not, until recently, been viewed as a risk.** Therefore, it is poorly monitored and poorly understood. We don't have any reliable data about how many retailers don't accept cash. And the drivers of retailers *not* taking cash are not being assessed effectively. The panel's view is that, as has happened in Sweden, it could be cash acceptance which has the biggest impact on consumers and society, rather than cash access. After all, there isn't a lot of point having cash if you can't spend it.
- **This raises important issues of public policy.** We don't have government policy yet on the importance of cash for society. A clear policy stance across government is important, both to give a clear framework for regulators to act within, but also to provide a useful steer for many retailers to provide direction to retailers, service providers and local authorities on what society expects of them in relation to cash.
- **In the UK, each retailer, utility or government department can decide individually if they will accept cash.** We don't have legislation in the UK requiring retailers and service providers to accept cash.
- **If cash isn't accepted, those who are dependent on cash will find it harder and harder to function in society.** We risk creating a cash-dependent subclass who simply don't have access to the same shops and services as the rest of society.
- **For many retailers or merchants, the cost of handling cash is the most critical factor in deciding whether or not to keep taking cash.** This includes both bank costs and business' time, and the fixed-cost infrastructure means banks are passing it on as higher unit costs. The costs of accepting cash are therefore rising and are set to keep rising. If we want retailers to keep accepting cash, then we can't make it too expensive for them to do so. It appears anecdotally that the charges for SMEs to handle cash are disproportionately higher than those for larger retailers/ service providers, and rising faster.
- **Service providers/merchants often don't understand the negative consequences of their decisions around payments.** The services which help people pay their bills by cash (for example, PayPoint, the Post Office/PayZone) require retailers and utilities to sign up in a planned way. If there isn't that sign up, consumers can be left struggling to pay for core services. Many councils/service providers/utilities etc, are simply unaware of the issues that stop many people being able to go digital. Therefore, decisions can easily be made which have the effect of exclusion, through ignorance. In fact, many retailers or service providers are making payment decisions which have poor consequences for some consumers without understanding these poor outcomes.



Ensure cash remains widely accepted



Our Recommendations

1. **The highest impact intervention we can make to keep retailers/ merchants accepting cash is to help retailers keep the costs of handling cash down.** If retailers see the cost of cash as equivalent to the cost of digital, then they are likely to keep accepting cash so long as consumers want to use it. We therefore recommend that:
 - I. **A programme of work is undertaken to reduce the cost of the wholesale cash infrastructure to keep the costs of accepting deposits and providing costs as low as possible** (see recommendation three)
 - II. **The FCA undertake investigatory work to examine the costs to SMEs of cash acceptance**, including bank charges and other costs (e.g. cost of driving to a branch). This will help understand whether the current model is causing consumer detriment now or in the future
 - III. **The FCA and PSR take appropriate action to ensure that pricing for cash isn't overly used as an incentive to move away from cash**, and consider remedies to continue to support cash access so long as Britain needs it. The FCA and PSR to also be mindful of the impact of their regulatory decisions on the incentives to support cash access.
2. **We recommend that innovation is overtly sought by regulators in the field of SME cash deposits to improve access to local cash deposit facilities.** Deposit-taking ATMs offer potential to widen deposit routes, but would require regulator support. We also recommend that the Post Office examines its SME deposit facilities and improves them, automating them where it is cost-effective to do so.
3. **We don't recommend legislation to require all retailers and other organisations to accept cash – at this stage.** This would be costly to manage and feels like a draconian solution to a problem that hasn't yet occurred. However, this should be considered if the policy driven approach fails. **However, we do recommend that essential government services and monopoly and utility services should be required**, through their regulators, **to ensure that consumers wishing to pay by cash can do so**, either directly or through a partner (such as PayPoint and PayZone).
4. **We recommend that an overt government policy position should be taken to the effect of 'We need to ensure that everyone can use digital payments. However, until digital does work for everyone, cash needs to be supported in the UK economy'.** This policy should include good practice principles such as encouraging retailers who do consider moving to cashless to run a thorough exercise to understand the implications and focus efforts on inclusion, and service providers going cashless to work with organisations like PayPoint/ PayZone or equivalent services to ensure that consumers who are cash dependent can continue to pay for their services.
5. **The government should remind organisations that changing payment choices has equality implications** - especially regulated industries and major retailers. The impact of choices should be explicitly assessed prior to changes being made.



Who needs to take this forward?
The government and regulators.

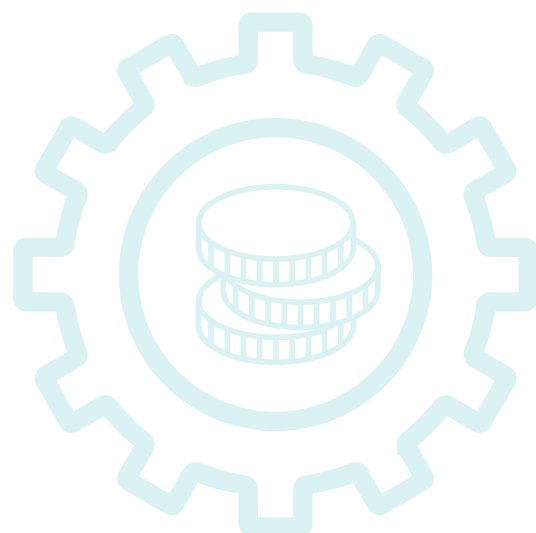
Recommendation 3



Create a more efficient, effective and resilient wholesale cash infrastructure which will support the UK despite declining cash volumes

The Issue

- **The wholesale cash infrastructure isn't a part of the system which consumers see.** But it matters hugely. It matters because, without an effective wholesale cash infrastructure, ATMs won't get filled, cash deposits won't get counted, and we won't trust the value of money. It also matters to the economics of the whole set of recommendations, as it currently has a largely fixed-cost infrastructure, so if cash volumes fall and costs don't, then the retail cash model risks becoming unaffordable.
- **Our wholesale cash infrastructure was built for high cash volumes.** The distribution centres that hold cash and the logistics that moves it around the country are now expensive for a world of lower cash volumes.
- **If we are to expect the banks to bear the costs of maintaining a cash infrastructure, we need to allow them to simplify and make it more efficient** – as has been done in Sweden, Denmark and Finland. By reducing the costs, we can expect the infrastructure to function for more years, and it will also help avoid the costs of cash handling rising for consumers and SMEs.
- **The current infrastructure is managed by a range of commercial companies** (not just banks) and some of these companies may consider exiting the market as its profitability declines – leading to the risk of disorderly collapse. See pages 60 and 61 for details.
- **It would be possible for this recommendation to happen commercially by the banks simply collaborating to find a new approach.** However, the banks have concerns about the perception of this and the competition concerns. The Bank of England has a material stake in the outcome of the approach, as it needs to ensure that the outcome meets the needs of the UK.
- **We need the current infrastructure in place for the £20 polymer roll out in 2020.** The earliest that a new model could be implemented is end 2020. However, it will probably take much of 2019 to develop a plan and agree a new model.



Create a more efficient, effective and resilient wholesale cash infrastructure which will support the UK despite declining cash volumes



Our Recommendations

1. **Convened by the Bank of England, bring together the major UK banks to commission design of a wholesale cash infrastructure which meets the UK's needs for the next 10-15 years.** Success criteria are – efficient, effective resilient, innovative and sustainable. To include consideration of creating a jointly owned “utility” (assets and/or commissioning) – akin to the models developed in the Nordics.
 - I. **It will be important to be open and transparent about this work,** and enable the commercial suppliers (including G4S, the Post Office, Vaultex, Loomis) to give input into the review, although not to lead it.
 - II. **The infrastructure for both notes and for coins need to be included,** as similar issues are faced by both, and both are needed to sustain cash overall.
 - III. **The review analysis should be undertaken by a consultancy appointed by the committee, and funded by the banks –** so that commercial data can be shared anonymously and aggregated by a third party, and to inject pace.
 - IV. **The ambition should be to have a plan agreed by the time the £20 note is issued,** with the aim of implementation starting in 2020.



Who needs to take this forward?

The Bank of England, with the major UK retail banks.

Recommendation 4

Ensure that digital payments are an option for everyone



The Issue

- **For most of the UK using cash is a choice.** But for 47% of the population, not having cash would be problematic, and for 17% not having cash would be a serious problem. We don't believe that this is because this group are simply choosing not to use digital payments – more that digital payments do not yet work for everyone
- **As our society moves digital, we need to make sure everyone can choose whether to participate.** This is a wider issue than payments, and some of the solutions are common, but there needs to be a specific focus on helping enable everyone to use digital payments. This is not about changing consumers, but about changing services so that they meet needs.
- **If we don't help people use digital, we will risk people and communities being left behind,** as those who can shift to digital payments largely do so. Also, we will be left with the (largely fixed) costs of running a cash infrastructure for fewer and fewer people.
- **There are a variety of reasons why people can't yet use digital.** There is no silver bullet: the single biggest solution would be to improve mobile and broadband connectivity in Britain, so that digital technology works across all parts of the UK. But beyond that, there are a range of issues and need to be systematically addressed. And it's not all going in the right direction – tighter security requirements for Know Your Customer (KYC) and Anti-Money Laundering (AML), for example, actually make digital even harder to use for some.
- **The UK has the world's strongest FinTech ecosystem with outstanding innovation.** Harnessing this innovation can help everyone to have a choice to participate.
- **Emerging or nascent digital solutions have the potential to meet the needs of everyone.** Using better, more inclusive design and making services easy-to-use services will widen the net of who can use digital payments. And for smaller segments needs, digital services can be designed to meet specific needs. But they are unlikely to happen without help, as many consumer groups are unprofitable to serve, and the cash dependent are less likely than others to seek out and find new digital technology. A conscious approach of developing solutions which can reach everyone needs to be a policy goal.
- **There is merit in the financial services sector working together,** in partnership with consumer groups, to design common solutions across the industry to solve specific issues. It is far easier for consumers to have a common standard across different banks or cards. However, this is hard to do without regulatory support and coordination, for reasons of competition law.



Ensure that digital payments are an option for everyone



Our Recommendations

1. **Enabling everyone to be able to pay for goods and services digitally needs to be a policy objective for the government, and a priority for financial services regulators.**
2. **Regulators and financial services firms should share responsibility for ensuring that there are solutions being developed which meet consumers' needs.** To achieve that we recommend:
 - I. **Regulators analyse the reasons why people need cash** (using this analysis as a starting point), and use the FCA's 'Innovate' to set industry challenges to develop inclusive solutions – in the same way as has been done for Green Finance
 - II. **The government identify 'challenges' which would both encourage innovation and send a clear message about the importance placed on this issue.** In the same way that has been done through the HM Treasury's Rent Recognition challenge
 - III. **Banks, building societies, FinTechs and payment system operators are encouraged to innovate to create solutions which address these needs** – including working together on common issues across the industry, facilitated by regulators and in partnership with consumer groups
 - IV. **The principle of 'inclusive design' is central to all of this work.** We recommend the development of clearer standards and guidelines for the sector.
3. **Regulators and the industry should ensure that once services or products have been designed which do solve consumer needs, they are made widely accessible.** We recommend that the FCA – working with the support of retail banks, systematically analyse whether there is benefit to consumers in extending requirements to ensure that these innovative services are provided across a wide customer base, and use their usual supervisory approach to work with banks and others to encourage widespread adoption.



Who needs to take this forward?

Regulators, Banks, the UK FinTech sector and government

Recommendation 5

Ensure joined-up oversight and regulation of cash



The Issue

- **We've taken the cash infrastructure for granted for many years.** Our regulatory approach is designed for a stable cash environment, not a world of reducing cash. Quite simply, the cash infrastructure has not been a burning platform for any regulator, or for governments or regulators - until now.
- **Similarly, we haven't had a government policy on cash.** We haven't needed it before, but now we do. The public policy implications of a lower cash economy are profound, and some critical choices needed to be made for the UK as a whole, including the importance on keeping cash viable while we work towards making digital payments a real option for everyone.
- **Cash is a system – and action in one part of the system can have a negative effect elsewhere.** For example, a high fixed cost wholesale cash infrastructure in a declining cash world would be highly resilient to peaks in demand but, but the rising unit costs risk charges to retailers rising, reducing cash acceptance This cash system has not, until now, required a lot of attention – but as cash declines, it will need increasing focus.
- **There is no single regulator who oversees the cash infrastructure.** That's not necessarily a problem in itself – multiple regulators regulate the banks, for example. However, regulatory mandates differ and overlap, and because cash has not been an issue of regulatory focus for most financial services (FS) regulators, this leads to the risk of uncoordinated action with unforeseen consequences.
- **As cash use reduces, new issues will arise.** They could include the resilience of cash, the requirement for stronger resilience of digital payments infrastructures, the potential privatisation of money in the UK, and the consumer detriment which comes with exclusion and rising prices. We need to be on top of this and not wait for a crisis.



Ensure joined-up oversight and regulation of cash



Our Recommendations

1. **We need a government policy on cash, addressing the key questions raised in this report.**
2. **We need a joined-up, forward looking and systematic view of the entire cash system by UK regulators,** analysing what's working and not and taking appropriate action, with the right powers and tools to achieve positive outcomes.
3. **HM Treasury need to determine what the regulatory mechanism is for oversight of the cash system, from start to end.** Is it right that it currently sits between different bodies? Are there any gaps in the powers that regulators need? Is there enough coordination? Are regulators using their regulatory powers effectively – and if not, is that because individual regulators are not aware of what impact they could have because they can't see the whole system? We recommend that:
 - I. **HM Treasury determine which regulators have what responsibility for cash,** ensuring that the whole system is covered, and that the relevant regulators have the powers they need.
 - II. **That HM Treasury and the regulators should agree how to coordinate effectively across all aspects of regulation for the issue of cash,** including systemic risk, resilience, banking business models, conduct and consumer detriment, and the future of money.
 - III. **HM Treasury to work with regulators to ensure that the respective responsibilities for cash are clear,** and to consider the need for legislation to ensure that the whole system is 'covered' and that the relevant regulators have the powers that they need.
 - IV. **That there is regular (annual) public reporting on cash usage and cash/digital payment trends,** highlighting issues such as merchant acceptance rates, issues of exclusion, system risks and issues, priorities for payment innovation, international comparisons and insight.



Who needs to take this forward?
Government and regulators

08 NEXT STEPS





Next Steps

We are calling for policy makers, the financial services regulators and the banks to consider these recommendations carefully - and respond with a plan to take the action required.

The work of the Access to Cash Review will continue and the panel will meet again in the Autumn to review progress and will invite key stakeholders to a round-table event to discuss progress.

The Access to Cash Review panel

The Access to Cash Review Panel has met throughout 2018 and 2019. Its members are:

Chair: Natalie Ceeney CBE



Natalie has a career spanning the public and private sectors, across a range of policy, leadership and regulatory roles. Natalie

is currently Chair of Innovate Finance, and a non-executive director of Countrywide PLC, Anglian Water Services Ltd and Sport England.

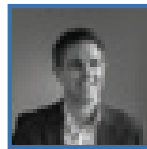
Lady (Margaret) Bloom CBE



An economist and honorary Professor at King's College London and an independent member of the LINK Consumer Council.

Margaret has been a senior consultant for Freshfields Bruckhaus Deringer since retiring in 2003 from the Office of Fair Trading, where she was Director of Competition Enforcement.

James Daley



James is Managing Director of Fairer Finance and has been a consumer campaigner and financial journalist for more than 18 years.

Before launching Fairer Finance, he worked for the consumer group, Which?.

David Hensley



David has been Director at Cash Services since 2012, with over 25 years' experience in senior management with Santander

covering business transformation, operations and customer services.

Monica Kalia



Monica Kalia is the co-founder of Neyber, a multi-award-winning fintech firm that helps UK employees to be better with their money,

through a complete financial wellbeing solution of education, savings and responsible borrowing. Monica also sits on the Board of Trustees at StepChange, the UK's leading debt charity.

Phil Kenworthy



In July 2015, Phil founded Payment Systems Consultancy Ltd, an advisory company specialising in Payments and Settlement, their

underlying systems/processes and associated regulation. Since that point, he has worked with a number of high-profile organisations including PwC, LINK & SWIFT.

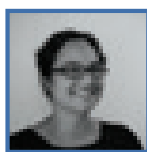
Richard Lloyd



Richard is the UK Chairman of Resolver, a consumer technology company, and Vice Chair of the Money and Mental Health Policy

Institute. He is one of the UK's foremost consumer rights champions and was Executive Director of Which? from 2011.

Lucy Malenczuk



Lucy is Senior Policy Manager, Consumer and Community at Age UK, focused on financial services and other consumer

markets. She led Age UK's work on cheques and is currently working on projects on financial resilience in retirement and scams.

Sian Williams

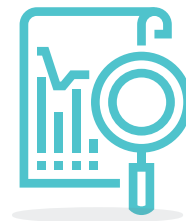


Sian is Director of Policy at Toynbee Hall and leads policy and practice programmes aimed at making money work better for people.

Her contributions include helping introduce the new fee-free Basic Bank Account, improving access to fee-free ATMs, and improving our understanding of what works in financial health.

Further details can be found at www.accesstocash.org.uk and the Review can be contacted via contact-us@accesstocash.org.uk. In addition, there is a Twitter page @accesstocash.

Research methodology



Focus groups

In September and October 2018 we held fourteen focus groups around the United Kingdom, designed and facilitated by Sian Williams of Toynbee Hall. We invited businesses, charities and trade bodies to attend the groups; eight of which were in different geographic locations around the UK and six of which were held in London and were consumer group specific.

We selected the following geographic locations: Belfast, Bournemouth, Cardiff, Glasgow, Manchester, Newcastle, Porthmadog, and Lerwick.

The consumer groups focused on the topics of disability, newcomers, later life, poverty and financial hardship, small businesses and medium-sized businesses. We asked all groups to explain the issues that they and their stakeholders had around cash access and use now, and then to think about the issues that they would face in 15 years if we lived in an almost cashless society.

To facilitate this future thinking, an animated video was shown to the participants. The video content went back to what life was like fifteen years ago and then projected forward to look at what life might be like fifteen years from now.

We held a further focus group over a webinar. This was facilitated by the Money and Mental Health Policy Institute and questioned people with mental health issues about their cash use: why they use cash and what the positives and negatives of alternative payment methods such as debit and credit cards.

In total, 97 different charities and businesses attended a focus group.

Call for evidence

We issued a Call for Evidence in July which closed at the end of September. There were almost 70 responses from a wide range of organisations, plus members of the public.

Overseas examples

We undertook detailed desk research to understand payment behaviours and implications across a range of countries, and also undertook a study tour to Sweden, where panel members met senior industry and consumer group representatives, central bankers and regulators, plus members of the all-party review into cash access. The review Chair also visited Hangzhou in China to understand more about their payments trends.

Online survey

We commissioned a survey of 2,000 nationally representative UK consumers between 15th and 20th November 2018 using an online methodology. The sample was representative across age, gender and region and covered the following broad topic areas:

- The daily use of cash
- The preference for cash
- The preference for digital
- The need for cash
- A cashless society

In-depth face-to-face interviews

We undertook in-depth interviews with over 20 organisations including regulators, ATM operators, banks, trade bodies and consumer panels. The intention was to gain a detailed understanding of their own, or their members', experiences of the cash system, as well as looking at wider solutions to make the system sustainable for the future.



References

- Page 4**
1 UK Finance, Payment Markets Report, 2018 and Access to Cash Analysis, 2018
- Page 12**
2 UK Finance, UK Payment Markets 2018
3 UK Finance, *ibid*
4 UK Finance, *ibid*
5 Bank of England, <https://www.bankofengland.co.uk/statistics/banknote>
6 UK Finance, UK Payment Markets 2018
7 UK Finance, *ibid*
- Page 14**
8 LINK ATM Scheme data
- Page 16**
9 UK Finance, UK Payment Markets 2018
10 Riksbank Payment patterns in Sweden 2018 May 2018
11 UK Finance, *ibid*
- Page 24**
12 FCA, The financial lives of consumers across the UK – Survey 2017
13 FCA, *ibid*
- Page 29**
14 <https://www.bigissue.com/latest/big-issue-vendors-are-backing-izettles-plans-for-contactless-busking/>
- Page 32**
15 UK Finance, UK Payment Markets 2018
16 UK Finance, *ibid*
- Page 33**
17 Innovate Finance, 2018 Investment Landscape, February 2019
- Page 34**
18 <https://www.nationwide.co.uk/about/media-centre-and-specialist-areas/media-centre/press-releases/archive/2018/7/11-open-banking>
19 <https://monzo.com/blog/2018/06/19/gambling-block-self-exclusion>
20 <https://www.starlingbank.com/blog/merchant-blocking-gambling-betting/>
- Page 35**
21 <https://www.bbc.co.uk/news/world-asia-india-41033954>
22 <https://www.biometricupdate.com/201811/smile-to-pay-facial-recognition-system-now-at-300-locations-in-china>
23 <https://findbiometrics.com/south-african-bank-biometric-atm-505075/>
- Page 37**
24 OFCOM and ONS
- Page 42**
25 <https://www.accountancydaily.co/acca-estimates-shadow-economy-value-ps223bn>
- Page 43**
26 <https://news.sky.com/story/gauke-cash-for-tradesmen-is-morally-wrong-10475019>
- Page 51**
27 <https://www.gov.uk/government/news/pm-launches-governments-first-loneliness-strategy>
- Page 54**
28 Riksbank Payments Patterns in Sweden 2018
29 <https://www.dutchnews.nl/news/2018/10/central-bank-warns-again-about-cash-free-society-dangers/>
30 <https://why.org/articles/fate-of-cashless-philly-stores-hangs-on-city-council-vote/>
- Page 57**
31 <https://www.telegraph.co.uk/money/consumer-affairs/three-hundred-cash-machines-disappearing-month-leaving-villages/>
- Page 60**
32 BRC Payments Survey 2016
33 <https://www.psr.org.uk/psr-focus/card-payments/the-interchange-fee-regulation>
34 Cash Services, Smaller Retailer Research 2017
- Page 61**
35 <https://www.gov.uk/guidance/withdrawal-of-personal-credit-card-payments-cjp29>
36 The War Against Cash: The plot to empty your wallet and own your financial future – and why you MUST fight it – Ross Clark
- Page 63**
37 Cash Services and LINK estimates
- Page 64**
38 Cash Services and LINK estimates £5bn is estimated by comparing the costs of cash calculated for a range of other countries vs their GDP and applying that to the UK.
39 Institute and Faculty of Actuaries: A Cashless Society – Benefits Risks and Issues)
- Page 67**
40 LINK ATM Scheme
41 LINK ATM Scheme
- Page 70**
42 <https://www.mobilepaymentstoday.com/articles/the-future-of-shopping-staffless-cashless-gapless/>
43 <https://www.reuters.com/article/us-china-payment/china-says-rejecting-physical-cash-is-illegal-amid-e-payments-popularity>
- Page 74**
44 The Post Office
45 The Association Convenience stores
- Page 76**
46 <https://wearecitizensadvice.org.uk/the-government-needs-to-find-out-why-people-arent-banking-at-post-offices-80d3aa158970>
- Page 79**
47 <https://www.fca.org.uk/publication/multi-firm-reviews/strategic-review-retail-banking-business-models-final-report.pdf>
- Page 80**
48 <https://money.cnn.com/2017/02/22/investing/atm-overdraft-fees-rise/index.html>
49 Source: LINK ATM Scheme
- Page 82**
50 <https://www.ukfinance.org.uk/high-street-banks-announce-new-access-to-banking-standard/>
- Page 84**
51 Access to Cash survey of 2,000 nationally representative UK consumers conducted in November 2018
52 <https://www.chainstoreage.com/finance-0/measure-to-ban-cashless-stores-advances-in-new-jersey/>
53 <https://www.theguardian.com/business/2018/nov/28/legislation-bans-cashless-business-policy-discrimination>
- Page 85**
54 <https://www.dailymail.co.uk/news/article-6322579/Councils-England-refuse-cash-cheques-taxes-fines.html>
55 <https://edu.bankofengland.co.uk/knowledgebank/what-is-legal-tender/>
- Page 86**
56 PayPoint
57 PayZone
- Page 88**
59 <https://otto.fi/automatia/>
60 <https://bankomat.se/about-us/>
61 <https://www.nokas.com/>
- Page 89**
62 <https://www.bankingtech.com/2017/05/abn-amro-and-ing-lead-charge-for-dutch-atm-survival/>
- Page 92**
63 <https://bankomat.se/about-us/>
64 <https://www.mckinsey.com/industries/financial-services/our-insights/attacking-the-cost-of-cash>
- Page 95**
65 Access to Cash Review research
66 <https://www.visaeurope.com/newsroom/news/visa-service-disruption>
67 <https://www.bbc.co.uk/news/business-44759913>
68 <https://www.cidr.org/how-disaster-relief-works/monetary-contributions-work-bestwhy-cash-is-best/#.XEOysM3LeUk>
- Page 96**
69 <https://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/mobile-consumer-survey.html>
- Page 98**
70 <https://www.fca.org.uk/news/speeches/overview-competition-fca>
71 <https://www.fca.org.uk/firms/fca-innovate>
72 <https://www.fca.org.uk/firms/fca-innovate/fintech-challenge>
- Page 99**
73 <https://www.openbankingforgood.co.uk/>
74 <https://www.gov.uk/government/news/new-overdraft-alerts-as-cma-banking-rules-come-into-force>

Page 103

75 <https://www.ofcom.org.uk/spectrum/information/site-sharing>

76 <https://www.ofgem.gov.uk/network-regulation-riio-model/network-price-controls-2021-riio-2/riio-2-events-seminars-and-workinggroups>

77 <https://webarchive.nationalarchives.gov.uk/20140402200211/http://www.competition-commission.org.uk/ourwork/directory-of-all-inquiries/local-bus-services-market-investigation/final-report-and-appendices-glossary>

78 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/141874/multi-operator-ticketing-guidance.pdf

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