

Spotlight

FINTECH: NEXT-GENERATION MONEY

Adam Afriyie MP / Manjula Lee / Tom Blomfield





Visit NS Tech for in-depth reporting on technology, business and government

THIS WEEK ON NS TECH



UK cyber crime falls by a third

What's behind the dramatic drop in incidents of computer misuse?



Matt Hancock's NHS overhaul

How will the government fund the health secretary's tech vision?



The week in govtech

We round up the public sector's biggest tenders and awards

Is fintech a flight risk?



For a while, it looked as if Brexit's impact on the financial sector would be limited – perhaps even positive. Last October, UBS said it was becoming “more and more unlikely” that it would, as previously planned, move 1,000 staff out of London; Goldman Sachs continued to build its new European headquarters in the capital. In May of this year, analysts said that London remained a “very solid” destination for business. In August, the government and the Bank of England said they expect 5,000 jobs will leave London because of Brexit, which is certainly considerable, but the financial services industry employs 350,000 people in the capital, and over a million across the UK. Light regulation, “sandboxing” and the massive inertia of the world's second-largest financial centre looked set to help the City weather the Brexit storm.

But the big banks have certainly made plans elsewhere. Search the internet for “new offices in Frankfurt” (home to the European Central Bank) and a long list of financial names appears; an estimated 25 banks have opened new bases in Germany, along with ratings agencies, asset managers, consultancies and fintech companies. Goldman Sachs has quadrupled its staff in Frankfurt, and in August its unfinished London HQ was sold to a Korean pension fund; it will now lease the building, perhaps for as little as 20 years.

More mobile still, however, are the talented young entrepreneurs and experts setting up tomorrow's fintech companies. The UK is home to leading “accelerators” that offer connections, expertise and resources such as office space, and the country's fintech sector is currently thriving. But for many new fintech firms, the growing technological bases of Eastern Europe offer the same regulatory stimuli and, possibly, access to larger markets in the future. With major financial institutions edging towards the coast, the argument for enduring London's formidable costs of living and doing business has become less convincing. What assurances or initiatives can the government now create to keep them from jumping ship?

NewStatesman

Standard House
12-13 Essex Street
London, WC2R 3AA
Subscription inquiries:
sbrasher@
newstatesman.co.uk

Account Managers
Lillian Lovatt
Justin Payne
+44 (0)203 096 2261
Commercial Director
Peter Coombs
+44 (0)20 3096 2268

Special Projects Editor
Will Dunn

Special Projects Writers
Rohan Banerjee
Augusta Riddy

Design and Production
Leon Parks

Cover illustration
Sam Falconer



Spotlight is the British Society of Magazine Editors' 2017 Launch of the Year. First published as a supplement to the *New Statesman* of 02 November 2018. ©New Statesman Ltd. All rights reserved. Registered as a newspaper in the UK and US. The paper in this magazine is sourced from sustainable forests, responsibly managed to strict environmental, social and economic standards. The manufacturing mills have both FSC and PEFC certification and also ISO9001 and ISO14001 accreditation. **This supplement can be downloaded from: newstatesman.com/page/supplements**

6 / Millennial money

With scant loyalty to the big financial institutions, the under-30s could create a new banking landscape

10 / Fintech and art

A company is using blockchain to “tokenise” art and sell off the shares, but does it undermine art collection?

13 / Green fintech

Does financial technology have a role to play in meeting the UN's sustainable development goals?

14 / The cashless society

As the battle between cash and modern forms of payment rages on, who will have the last word, and what is at stake?

18 / Adam Afriyie MP

The chair of the APPG on fintech explains why he, and others, see the UK as the ideal home for open banking

News



JACK TAYLOR/GETTY IMAGES

BoE on lookout for student stars

Rohan Banerjee

The Bank of England is launching a competition for aspiring entrepreneurs, with a paid summer internship in the bank's technology team offered to the winner or winners.

On Monday 12 November, the bank will announce the exact details of its challenge, inviting individuals or teams of up to six people to overcome an everyday financial problem using technology.

All entrants must be over 16 and currently studying at a school, college or university. The competition is aimed at students in the United Kingdom, but the bank will consider entrants from abroad as well. All entries must be written in English and able to be opened on a standard Windows laptop.

The bank encourages students to be creative, but a size guide for entries suggests a 750-word written response, a ten-slide presentation or a two-minute video. Entries should be submitted in advance of a 26 November deadline. The judges' decision of the winning submission will be made in the first quarter of 2019.

The winning entry will be rewarded with a four to six-week paid placement at the bank's central London office.

LeoPay customers left without access

Dorothy Musariri

LeoPay customers have been unable to access their accounts after a decision was taken by the Maltese government to freeze activities at SataBank, which is co-owned by LeoPay's founder. Following a mandate from Ernst & Young, which now controls SataBank under Malta Financial Services Authority

Dutch state visit yields fintech benefits

Dorothy Musariri

UK and Dutch ministers announced new commercial agreements during a state visit this week, and fintech firms in the UK are set to benefit.

The UK government announced that fintech startups Azimo, Currency Cloud and Vitesse are investing £5m to upscale their operations in Amsterdam and Rotterdam.

Azimo chief executive Michael Kent said the Department for International Trade had played a critical role in UK fintech companies scaling globally.

Dutch bank ING, meanwhile, also

announced a revamp of its Innovation Lab in London, following a £5m investment in UK fintech company Funding Options.

Trade Secretary Liam Fox said the Dutch state visit was an opportunity to celebrate the 400-year long trading heritage of both nations. "As the UK forges an independent trade policy for the first time in more than four decades, my international economic department is working with the Dutch – our North Sea Partners – towards a bright trading future," he said.

(MFS) requirements, the LeoPay platform is preventing some customers from making payments, while closing other accounts entirely.

LeoPay is an international money transfer and multi-currency bank account provider. The current situation has raised concerns as a number of customers use digital money transfer services to keep large amounts of cash in their accounts instead of depositing it in a physical bank. LeoPay offers non-UK residents a de facto European account through SataBank, but it is noted that these accounts are not covered by any type of deposit guarantee.



Goldman-backed cards land in UK

Augusta Riddy

Payment cards continue to be a visual focal point in the world of fintech, as companies compete to have the most attractive piece of plastic. Marqeta, which was established in 2010, has raised \$116m in funding to date.

The Goldman Sachs-backed startup has opened an office in London, from which the company plans to offer its payment card services to the rest of Europe.

Marqeta issues payment cards to financial organisations, and operates an open API payment platform service. A

wealth of digital bank openings in the UK and Europe is a key motivation for the move. Founder and chief executive Jason Gardner said the company's decision to establish itself in London had not been effected by Brexit.

Collaborating with Visa, Marqeta claims to have already acquired new customers. "We've been quietly building a presence [in Europe]," said Gardner.

SEC brings fintech in from the cold

Augusta Riddy

The United States Securities and Exchange Commission, an agency which imposes federal securities laws to "protect investors" and maintain "fair, orderly, and efficient markets", has set up a portal for interacting with fintech companies, called FinHub.

The portal will increase communication between the SEC and companies that employ blockchain and other new technologies, as the agency tries to get a grip on this burgeoning market. It will help startups to be compliant by concentrating the SEC's support services in one easy-to-access place, and promote communication between fintech firms and the wider public.

On the homepage of the portal is a form, which companies can fill out to request "meetings and other assistance relating to fintech issues arising under the federal securities laws." Valerie A. Szczepanik, the leader of FinHub, said: "We've found it incredibly helpful to hear from folks, especially in fast-moving areas like distributed ledger technology."

The chairman of the SEC told *Forbes* magazine that the portal is "a central point of focus for our efforts to monitor and engage on innovations in the securities markets that hold promise, but which also require a flexible, prompt regulatory response."



Chinese regulators step into P2P crisis

Will Dunn

China is drastically reforming its huge peer-to-peer lending market after hundreds of thousands of individual investors lost money on risky investment products and almost a trillion yuan (£112bn) remains at stake.

In August, hundreds of protestors forced their way into the offices of PPMiao, in Shanghai's financial district, after the company collapsed owing an estimated £91m to more than 4,000 small investors. PPMiao was one of several hundred P2P companies to fail in the last few months, many of which claimed to be backed by state enterprises or endorsed by local government.

China's P2P sector grew explosively from 2007, encouraged by a lack of regulation, a need for small businesses to access finance and a desire for higher returns among investors. By 2016, 160m people had used P2P investments or loans and nearly 4,000 platforms had joined the market. This is expected to dwindle to around 50 companies over the coming year, as consumers flee for safer products and regulation makes more platforms unsustainable. Reports show that a significant number of executives have fled the country, while police have barred others from heading abroad.

Fintech's fight for millennial money



As loyalty to high-street banks fades, startups are targeting younger customers.

Arun Kakar finds out who's winning the battle to bank the most cash-strapped generation

From their appetite for avocados to their dependence on Deliveroo, there are many inaccurate clichés about the lives of millennials, but the image of a generation beset by financial woes is, however, all too credible. A Resolution Foundation report this year found that average real hourly earnings for British under-30s fell by 13 per cent between 2007 and 2014, while Statista reports that 23 per cent of UK millennials don't have any savings. ABA found that 71 per cent would "rather go to the dentist" than take advice from a bank.

"Lifestyles have completely changed but the traditional ways of saving money haven't," says Victor Trokoudes, co-founder and CEO of the savings app Plum. "You're still expected to figure out in your busy life on your own, how much to put aside and [how to] manage that."

Enter fintech, carrying promises of

simplified saving and easy investment. With less to spend and save, millennials are embracing products that employ everything from deep learning to artificial intelligence to smarten up their finances.

Plum, for instance, is a chatbot that uses Facebook Messenger to interact with its users by linking to their bank account. The app analyses transactions to make automatic "savings" towards set goals, updating the user on how much they're putting aside. Trokoudes launched the app with his co-founder, Alex Michael, after realising that they didn't have a "consistent" way of putting money aside. By using Facebook Messenger, he was able to target millennials like himself on a familiar platform. Millennials, he says, place great value on convenience.

"Today, everything is changing; if you have Uber to call a taxi, it makes sense to have something like Plum, that does all



23% of UK millennials have no savings

SHUTTERSTOCK/ GAUDILAB

the manual, boring calculation stuff for you.”

While Plum interacts with millennials on a separate platform, other savings apps, such as Squirrel, are going a step further. The Squirrel app creates a separate bank account and splits the user’s salary into savings, bills and a weekly allowance. For founder and CEO Mutaz Qubbaj, control and empowerment are the core themes driving the popularity of such apps.

“In the past [personal finance] was more about just security and access, but now people have a different interaction with their money,” he says. “People have a lot more choice in terms of how they can go about managing that relationship.”

Whether by contactless cards or online shopping, it’s never been easier or quicker to spend money but it’s also never been more difficult to save, Qubbaj argues.

Young people in particular, he says, are

being “pushed into buying things they do not need using money they do not have”.

While millennials are notoriously sceptical of credit (just one in three US 18-29 year olds has a credit card, according to Bankrate) – the Swedish bank Klarna has found that convenience is also a powerful tool in encouraging spending. Klarna offers a range of payment options at almost 100,000 partnered merchants including Asos, Miss Selfridge, Schuh, Topshop and JD Sport. Most Significant is Klarna’s “pay later” option, which offers an immediate purchase with payment “sliced” into interest-free monthly instalments. In theory, a Klarna user can buy, try on, and return an item on Asos without paying for it using this option. Klarna is reportedly preparing to release a physical card later this year.

With over 60 million customers, Klarna is one of Europe’s largest startups and, unlike many of its fintech peers, turns a profit. But even a business based on encouraging millennials to spend online appears also to see their finances as needing security. In May, Klarna launched an app to encourage its users to “take control” of their personal finances.

While Squirrel and Plum look to change the way millennials think about their income, spending and payments, other new platforms are investigating ways to encourage millennials to invest. According to the Foreign & Colonial Investment Trust, nearly eight million in the cohort have failed to start a long-term savings or investment plan despite two-thirds having ambitions to buy a house and have a family. Investing is perceived as risky, time-consuming and inaccessible among millennials, says Michelle Pearce-Burke, chief investment officer at Wealthify, which is backed by Aviva. Aimed at a “new wave of investors,” Wealthify’s digital platform looks to address these problems with its minimum investment of £1 and range of bespoke options. As with other “robo-investors”, users decide the level of risk and investment style and adjust their product accordingly.

“People like myself want to do investment in a different way,” says

More than half of the P2P lenders in Europe are aged 18-34

Pearce-Burke, who co-founded Wealthify in her mid-20s. “They’re looking at smart apps that are well designed and easy to use, with intuitive service. They don’t necessarily want to go through the process of having face-to-face meetings and filling in reams of paperwork.”

Wealthify is also conscious that the investment concerns of millennials are also different. This year, it announced the creation of five ethical investment plans focused on organisations “committed to having a positive impact on society”. Its own research found that 74 per cent of UK investors aged 18-34 said they would consider ethical investment portfolios, almost ten per cent more than the number of existing investors surveyed.

Alternative investment products such as peer-to-peer lending – debt finance that allows individuals to borrow and lend money through an intermediary – also connect with this narrative. “It fits with how young people feel about the world, which is about a sharing economy, it is about connectivity,” says Mario Lupori, chief product officer of Ratesetter, a peer-to-peer lender that has created almost £3bn in loans since it was founded in 2010. While millennials are in the minority among Ratesetter’s investors, they make up 53.9 per cent of European peer-to-peer lenders, according to Robo.cash.

With interest rates flat and savings accounts effectively losing money against inflation, millennials are investing differently. Lupori says they are increasingly likely to invest in P2P lending over a traditional stocks and shares ISA. Ratesetter simplifies the investment process by automatically allocating money to borrowers and offers returns of up to 5.7 per cent (at time of writing), but also the ability to exit early. However, “instant access” is not guaranteed and Ratesetter is not covered by the Financial Services Compensation Scheme.

Big bank failures

Whether aimed at saving or investing, consumer fintech firms are united in their ability to address the financial needs of millennials in a way that big banks and

financial service providers are struggling to tackle.

The fact that Monzo and other “challenger banks”, such as Revolut and Starling are pitched as giving millennials control over their finances demonstrates that fintech firms have “identified something that resonates with this particular audience,” says Lupori. Not only are the big banks failing to properly identify the concerns millennials have for their money, they’re also lacking ideas to address it. The pace of innovation from fintech firms is troubling for the banks, who “despite their budget, still haven’t been able to compete,” he says.

For Pearce-Burke, banks are “crowbarring” technology onto their existing systems as an “afterthought”, whereas millennials – a majority of whom communicate more on digital platforms than they do in person, according to LivePerson – are after something that feels like it has “been built in the 21st century”.

Incumbents are also failing to resonate with the cohort on a communicative level. “People are fed up of being talked down to, like a parent-child relationship,” adds Pearce-Burke. “What some of the customers appreciate in our service – and I think it applies to other fintechs – is when you speak to them on a peer-to-peer level.”

Fintech firms position themselves as friends of their users (Plum’s slogan, for example, is “your money’s best friend”), employing data analysis to target the precise needs of their customers and target them with specific solutions. For Qubbaj, this is being facilitated by a broader transition towards “the bank of me”, where financial solutions are focused more on the particular needs of individuals as opposed to a one-size-fits-all product – the kind that big banks are currently driven by their scale to offer. “More custom financial technology providers [are] coming out and solving needs that wouldn’t have been able to register on the radar of some of the largest providers and banks out there,” he says. The incumbents have been warned.

AI can help people afford 20% more on their first home

Using machine learning, Proportunity helps young people jump on the housing ladder in their early 20s and afford the home they really want, says head of business development **Stefan Rusu**

According to the UK's Institute for Fiscal Studies, the probability of a young person on a middle income owning a home has more than halved in the last 20 years. We've identified the main issue as deposits; the typical first-time buyer in London needs a deposit of around £72,000. As such, the number of first-time buyers per year has dropped by 200,000 in the last 20 years. 200,000!

At the same time, artificial intelligence (AI) is advancing at a pace like never before. So what impact could this progress have on the UK housing market, and what could it do to help young people who are chasing the dream of home ownership?

Proportunity – the first FCA-authorised mortgage lender built by first-time buyers – has created a smart product that enables young people in London to own the homes they really want up to ten years earlier. How? To put it simply, we lend you a bigger deposit on top of a regular mortgage, similar to Help to Buy. However, unlike the government's scheme we don't restrict you to new builds and don't have price caps. Due to the increased deposit, you can afford a 20 per cent bigger property instantly, which might have taken you an extra ten years to save for. Or you can use the Proportunity deposit to reduce your mortgage and pay, in total, up to 40 per cent less per month.

But what does AI have to do with it? We use machine learning forecasting technology to target properties that have high growth potential, offering

customers an equity loan of up to 15 per cent of the property's price. This means young people can buy much faster, cheaper and bigger; they can combine this loan with the minimum of five per cent they have already saved for a deposit.

Proportunity's team is made up of recent first-time buyers, some of us as young as 25. "We've built the mortgage lender that we wished would have existed for first-time buyers. One that gets young people onto the property ladder when they perhaps didn't think it would be possible," explains Vadim Toader, Proportunity's CEO.

Proportunity's forecasting model identifies a number of property-specific characteristics and datasets that will impact the value of a home. These include aspects such as surface area, bedrooms and tenure, but also area-level indicators such as new homes set to be built in the area, schools, local investment, transportation links, new businesses and crime levels. Young consumers are already extremely tech-savvy and like to know their options, so having data-driven facts on their side can only serve to calm the nerves and build confidence when taking the huge step of buying a first home.

"We believe that by effectively increasing first-time buyers' affordability, our algorithms and team of finance and property specialists are enabling them to purchase a home now and democratise home ownership," says Toader. "We're very excited to be able to take technology out of labs and use it to help transform generation rent into generation own!"

"Looking to the future, we already have plans to broaden our service beyond greater London, and even to other countries, and we are very keen to make these loans available to customers such as young families and upsizers, not only first-time buyers."

For more information, visit:
<https://proportunity.co>

IN ASSOCIATION WITH



A new blockchain-enabled platform is cracking open the art market for investors, but does it leave room for aesthetics?

Augusta Riddy talks to its founder

The art market goes to bits

Leonardo da Vinci's *Salvator Mundi* sold at Christie's for \$450m last year, and even the most hawkish market players were shocked. For the wealthy, art collection can be a source of both prestige and impressive returns. The Art Basel and UBS Global Art market report estimated that the global art market was worth \$63.7bn in 2017. But can a business that sells 500-year-old paintings ever catch up with the pace of modern fintech?

Marcelo Garcia Casil is happy to admit he didn't know much about art when he entered the business. He was, he says, "attracted by the way the art market worked... I realised it was hugely inefficient". He founded Maecenas, an online art investment platform, to allow investors to get in on the high-value art game without having to put up \$450m for a da Vinci. Casil's reasoning is that the fine art market is an attractive and age-old

investment prospect that offers the opportunity to make a lot of money but, so far, this has been limited to a select few.

Maecenas is not for people who want to buy art for art's sake. The platform identifies "investment-grade artwork" that is, at around £5m per piece, unaffordable to the investors they are targeting. "The price range of the artworks that we bring to customers is not really something that investors could own and have hanging on the wall," Casil says. Instead, Maecenas uses blockchain technology to split some or all of the artwork into shares, which are then auctioned off to investors.

To do this, the company created its own cryptocurrency, called ART. The currency is based on the Ethereum public blockchain, on which Maecenas runs its auctions. "It's like having your own arcade or amusement park, where you had to buy chips to play." ART can

be accessed through a range of currencies, including Bitcoin, Ethereum, or USD: "We calculate the price," Casil explains, "we quote a number of ART equivalent, then we allocate [it] to them." Once the auction is over, the ART is converted back into the investors' chosen currency.

In September, the company successfully carried out its first online auction, of the 1980 Andy Warhol painting *14 Small Electric Chairs*. The original owner kept a 70 per cent stake, and 30 per cent of the work was "tokenised" into shares, which collectively raised \$1.7m. This kind of partial sale is the company's current model, Casil explains, but they "may explore the 100 per cent sale model." One hundred people participated in the auction, but Maecenas is looking to expand that number, and lower the price of the minimum bid. "On the first auction, we restricted the number of participants to 100 because we wanted to





be in full control of the process ... [so] we had to set a relatively high minimum of \$5,000 US dollars. Long-term, our objective is to bring this number down as much as we can."

Considering the value of these works of art – the Warhol painting has an overall valuation of US\$5.6m – and the fact that the strength of the art market doesn't show much sign of abating, holding a \$5,000 share in such a piece might seem like a stable and attractive investment. For Maecenas, it's a business model that allows small investors to take part in a notoriously closed-off industry. "It's more probable to find hundreds of people who are willing to invest, say, \$10,000 each for an artwork, than a single buyer having the cash available."

Centuries-old auction houses such as Sotheby's and Christie's dominate the art market; Sotheby's has an annual sales turnover in excess of \$4bn. These houses

also charge considerable purchasing fees – between 13 and 25 per cent, depending on the sale price – which Casil argues puts off more dynamic investors who aren't necessarily planning to hold onto the pieces for long. "If you want to give the option to investors to take fine art seriously as something they could have in their portfolio, we need to lower the fees." Another reason why Maecenas uses blockchain technology is because it incorporates a ledger. "It's very good at tracking ownership, and change of ownership, so by using blockchain we do away with all the manual work and all the overheads, and we can make this type of transaction very low-cost and almost instant." As such, the platform charges two per cent to investors, "in line with what they would typically pay if they want to invest through a fund".

Has the platform ruffled any feathers? Have any purists accused Casil of taking

the pleasure out of art collection? After all, it doesn't result in owning the physical piece. "That's been said to us," he admits. But, he argues, it's time to shake things up a bit. "There are already plenty of companies who facilitate purchases of art; we don't feel there's an opportunity for us in that market."

The collector Charles Asprey says that an operation of this kind is "a major misunderstanding of the concept of luxury" and creates a transactional relationship that does little to benefit art. "It's been long established that acquiring art is a luxury, but the luxurious part of that process was the seeking-out of the object, its celebratory return to one's home and then the display, the big reveal. That was evidence of being enlightened, when the link between wealth and the importance of support for the arts was understood." He says that a "sad logic" is emerging "to art becoming just another asset class, de-emotionalised, locked away, safely stored in warehouse and on a spreadsheet." It is, he concludes, "a hollow commitment."

As an asset, too, blockchain stakes in art share a drawback with many cryptocurrencies – they are not as easy to cash out as they are to buy. Shareholders can privately sell their share to another investor, as they would a painting, or a buyer can make an offer for all the shares at once – buying what Casil calls, a little oddly, "the physical underlying painting".

Maecenas is also looking into creating a trading platform "where investors owning shares in the artwork can buy and sell them from each other, similar to how people buy and sell stocks in companies." As with owning a share in a company, investment offers little, if any, access to the physical entity itself, and limited control over anything other than its speculative value – something that is, in art, underwritten by not much other than collective opinion.

Maecenas, then, is calling the industry's bluff. In Casil's world, art isn't special; it's an asset, and people want in. They may not even like art that much. "Our argument is, if you invest in art purely for enjoyment, then this is not for you."

Why data is the key to financial inclusion

Rhona Parry, vice president, external affairs, EU at Equifax, explains why more government data will help the most vulnerable in society

In the US, there's a dating website that matches you with potential partners based on your credit score. Passion killer for some; crucial insight for others. Thankfully we don't have such an empirical approach to finding love on this side of the pond. But the UK does lead the world in harnessing data to help in other ways.

Some of the most innovative firms are in the UK, and we're ahead of the curve in thinking about responsible use of data, as shown by the creation of the Centre for Data Ethics and Innovation. The key building block for our continued success on this global stage is access to data.

Government is one of the biggest data businesses in the UK. Government-held data has huge potential to be used for the public good, particularly to tackle financial exclusion. The Financial Conduct Authority estimates 50 per cent of adults show signs of potential vulnerability. In the last two years, 4.5m adults were declined a financial product. In some cases that's the right decision, but often it's because of a lack of data about the person applying.

Some of the most financially excluded people in the UK live in social housing. This means they're often forced to use high-cost credit at an annual percentage rate of more than 1000 per cent. In turn this can lead to spiralling debt, impaired social mobility, and higher costs of living.

For most people, the biggest monthly cost is rent, yet this payment data isn't currently widely captured. If we could record rental payment data from local

authorities, the vast majority of tenants would benefit from lower interest rates and access to a greater range of products. Equifax has identified that for individuals paying social and affordable rent, more than two-thirds of people with limited credit history would see an improvement in their credit scores if rental payment data was taken into account.

The government has a strong track record in opening up data for defined public interest purposes, from the electoral roll to VAT registration data. Likewise, our regulators are world-leading in helping businesses and consumers to innovate with data, from open banking to regulatory sandboxes. We also have a proven culture of collaboration between the private and public sector to maximise the value of data. The sharing of rental payment data should be the next step for the government to take.

Combining big data with artificial intelligence (AI) also offers widespread benefits for addressing society's most pressing challenges. Equifax's patent-pending NeuroDecision Technology® is already being used around the world to help improve financial inclusion. In a recent project in Latin America, where much of the population is unbanked and struggling to access financial services, the accuracy of Equifax's models almost doubled when we combined AI and big data. For the millions of people that are financially excluded, that is game-changing.

Of course there can be risks in sharing data. To overcome those, businesses and governments must earn and keep people's trust that their data is treated safely and ethically and is used to empower them as citizens and consumers. The government should lead by example, making data open where possible. Not for its own sake, but because the perils of inaction are greatest for the most vulnerable.

Equifax is a global data, analytics and technology company that brings insights to consumers, policymakers and businesses

IN ASSOCIATION WITH

EQUIFAX®

Meet the startup aiming to kick-start green fintech

World Wide Generation founder and chief executive Manjula Lee talks to Dorothy Musariri about the impact fintech can have on global sustainability



Green finance is on the rise. World Wide Generation (WWG) is a company that uses blockchain to promote eco-friendly technologies to tackle the UN's sustainable development goals. WWG founder and chief executive, Manjula Lee, launched the startup in 2016, after a "serendipitous" conversation with Prince Charles, and the company established G17Eco – a platform that encourages green digital finance initiatives. It provides an interoperable, transparent marketplace for sustainable investing and is used to unite government, business, civil society and communities into one ecosystem. "The organisation's goal is to achieve a global resolution on poverty, inequality and climate change by 2030," says Lee.

Lee compares the G17Eco platform to a "virtual home to house and track all your sustainable initiatives". The platform works with fintech companies to assist them in planning their G17Eco home, built using "data rooms", featuring high-tech and cost-effective ways of monitoring and managing the entire investment value chain. The initiative allows users to manage ecosystem programmes with various companies across multiple territories, providing real-time monitoring to ensure everything is on track.

Because blockchain records are irreversible, Lee says "the data can be trusted and fully traceable. G17Eco comes with our Universal Trackers data bots, to help you safeguard your sustainable development goal investments, transparently showing

you where your money is going, measuring the impact against the SDGs and helping you reduce costs and risks."

Lee explains that funds invested in green infrastructure and renewable energy will make the most impact. Fintech could potentially impact third-world countries' strategic priorities and help them to progress through their stages of development, especially those with lagging financial systems.

Lee was one of a select few to accompany the Prime Minister during her week-long trip to Africa in August after she pitched her post-Brexit strategy to the cabinet. As a result, she now serves the City of London's Global Steering Committee for Sustainable Development Finance to assist in positioning "London as the sustainable development finance capital of the world". During their trip, Lee says, she and Theresa May discussed some trade deals with Africa, which would give the UK an opportunity to provide money to "really move Africa from aid to trade".

Lee, who also works with the global committee group Sustainable Development Capital Initiative, says: "By 2030 [we] will look back and say that it was Britain that galvanised the world to deliver global resolution on poverty, equality and what an achievement that would be, and not to mention that the economic argument is massive."

WWG is currently working on a project with Unilever that helps those in poorer countries. "We have now gone live with Unilever on one of the most prominent programmes, which is about delivering sanitation and hygiene products to schools in South Africa," Lee says. "We built a model for them for five schools that monitors and measures the value chain of the whole programme."

The agenda promotes hygiene in schools in third-world countries, teaching children how to brush their teeth and clean their bathrooms. It currently helps around 300 schools in South Africa, with the goal of eventually taking on 1,700 schools.

As digital and debit card payments overtake cash in the UK, Rohan Banerjee assesses the impact this trend could have

The cost of change



Earlier this year at the Edinburgh Festival Fringe, the comedian Ahir Shah ran a “free” show at the city’s Cabaret Voltaire venue. Although he didn’t charge an entrance fee to see his hour-long set, a donation bucket was passed around at the end – a long-running custom for free shows at the Fringe. But over the past couple of years, this custom has encountered a snag: fewer punters are carrying cash. It has led Shah, many other comics, and even buskers, to invest in a portable card machine. “It’s not to punish stingy punters, rather it’s a sign of the times,” he explains.

This is a trend which stretches beyond the performing arts. Last year, a report by UK Finance found that debit card payments had overtaken cash as the most popular form of payment. Consumers used their debit cards 13.2bn times in 2017, an increase of 14 per cent

from the previous year. The number of cash transactions in the UK, meanwhile, dropped by 15 per cent. Almost half (5.6bn) of these transactions were contactless. UK Finance also reported that 3.4m people “almost never used cash”, instead relying on cards. The “rising popularity of online shopping and flux of mobile banking apps” were cited as other factors in cash’s demise.

The evolution of financial technology has been driven by a human craving for “convenience”, according to Dr Joe Gladstone, assistant professor of consumer behaviour at University College London’s School of Management. “Humans are evolutionarily hard-wired to seek the cognitively and physically easy option. Technology is enabling these desires.”

Tom Blomfield, CEO of the mobile-only bank Monzo, says: “I think that the value of data to consumers is being

appreciated more. Having electronic receipts and a record of where their money is going makes people feel more secure.”

Monzo, which provides real-time updates of purchases made on a card linked to a smartphone, has more than 500,000 current account customers, making it the biggest digital challenger bank in the UK. “Having the data returned to them in real time,” Blomfield says, “offers a consumer some reassurances. Getting that push notification straight away helps people to stay on track of what they’re spending and where they’re spending it. It is a lot easier to lose a wad of cash.”

Ross Brown, whose south-east London coffee shop, Browns of Brockley, only accepts payments by card or mobile banking apps, says that convenience is as much a motivator for businesses, as it is for consumers. “It takes roughly the



same amount of time to count a float at the end of the day whether you've made five or 100 per cent of your sales in cash. I would say for a business that is quite fast-paced and doing a lot of small transactions, cards are quicker. I prefer not faffing about counting out change, or trying to work out if someone's paying with a fake note, or an out-of-date coin."

Blomfield adds that the "business case for not using cash" is clear in providing the opportunity to "remove some costs altogether". He says security, for

Some small shops still only operate in cash

example, "is a lot more straightforward. Physically handling cash is an expensive part of any business. You might have to invest in a safe or actual guards to keep the money safe." Blomfield echoes Brown's sentiments on saving time. "Sending kilos and kilos of cash to a sorting centre can take ages."

What effect do cashless technologies have on people's spending habits? Is a cashless society likely to spend more or less carefully? According to Gladstone, the detachment from cash that contactless payments provide can anaesthetise the psychological pain that comes with handing over large sums of money. "There is evidence," he says, "for a 'credit card effect', where people tend to spend more on hedonic, discretionary or fun purchases, when people use cards over cash. One reason for this is that cards reduce that wince of pain we feel when we spend more than we would like."

Not everyone thinks that this is a good idea. A report by the Bank of England last summer suggested that the increased popularity of contactless cards was linked to a rapid growth in consumer debt; while a survey of 2,000 British consumers carried out by credit-checking service ClearScore found 72 per cent of respondents admit that contactless payment options made them feel more inclined to make impulsive purchases. Perhaps Monzo's push notifications, then, are not much of a deterrent.

In Sweden, where 59 per cent of all consumer transactions are completed through non-cash payments, the Swedish National Pensioners' Organisation, has raised concerns that the cashless drive will lead to the social exclusion of the elderly, who may not have access to the internet at home or may feel nervous about using technology. The vast majority of the nation's banks have long stopped allowing customers to withdraw or pay in cash over the counter. But spokesperson Ola Nilsson told the BBC World Service: "As long as there is the right to use cash in Sweden, we think people should have the option to use it

and be able to put money in the bank."

Fintech is on the rise globally, but cash remains the second-most popular payment method in the UK, accounting for just over a third of all payments. A 2017 report by consumer research group Which? found that around 2.2m people still mainly used cash for their day-to-day grocery shopping, even though nine out of ten of them had a debit card. This figure included a lot of people who lived in rural areas, where "many small and remote shops still operate exclusively in cash".

While UCL's Joe Gladstone acknowledges the inherent challenges of an increasingly cashless society, he thinks "it will have a net positive impact" by "reducing fraud, substantially increasing taxes paid and improving economic efficiency". For Gladstone alienation, of the tech-shy elderly or those who live in rural areas, is "definitely not inevitable". And he says effective government policy could help. "New technologies mean there is no reason that shops can't immediately accept digital payments, for example. So if cash was actually prohibited, these shops and communities would quickly adapt. The reason consumers have free banking in the UK, which in many ways is an incredible situation which we take for granted, is because the government mandated banks to provide this. Similarly, the government can mandate or incentivise banks to proactively provide vulnerable people easy-to-use digital products."

For all the benefits of technology, however, it also carries its own risks. Consider, for instance, a cautionary tale from Visa. Visa experienced a Europe-wide hardware failure this summer, which left millions of customers unable to make payments by card. Some cardholders found that their attempted transactions meant funds in their accounts were ring-fenced, leaving them unable to even withdraw cash for use in lieu. It may be argued, then, that this is symptomatic of a wider problem: an over-reliance on technology, which makes the case for cash as a

Cash still represents a valuable contingency



valuable contingency.

With an increase in digital and cashless transactions, the question of data security also comes into play. Who has access to this information? While cash provides anonymity, some consider contactless payments data to have enormous surveillance implications. Brett Scott, a former broker and the author of *The Heretic's Guide to Finance*, has argued that there is a “dark side” to cashless technologies.

He wrote for the *Guardian*: “There are certain institutions – banks, payments companies, and governments – that really do want the death of cash... engineering the general public’s consent for cashlessness is a subtle process. People may indeed enjoy a new payments app or contactless card, but financial institutions then use that to justify the gradual removal of the cash infrastructure – such as ATMs – in order to deliberately make cash harder to use. This feeds back, making digital seem relatively more convenient, ‘inspiring’ more people to choose it.”

At best, according to Scott, digital payments can enhance market research. At worst, private companies may use data as a means to “invade privacy”,

while alienating anyone without a bank account. “Coins and notes are a flexible and anonymous medium for quick small transactions that don’t involve an intermediary. In a world where all transactions are electronic, though, the only means of paying is via a bank account, meaning anyone without a bank account cannot buy anything. If you are a refugee with no permanent address and bank account, good luck.”

Ultimately, while fintech has triumphed in providing consumers with a variety of payment options, opened up new markets, especially online, and created a sector large enough to potentially absorb many job replacements within itself, it’s apparent that cash needs to be spared obsolescence for the time being. Rolling out fintech more widely in rural areas and helping the elderly population to develop digital skills would come at a huge cost to any government, while the Visa fiasco highlights the risks of having a plan B, and the privacy which cash ensures must still be respected. If champions of cashless payments are enthused by a wider provision of choice, why, then, should they seek to remove cash?

Making payments safe in the digital age

By incorporating a few key strategies into the shift towards digital payments, a great deal of risk can be averted, says Kalixa Group chief executive Kamran Hedjri

With payment solutions moving towards user-friendliness and simplicity, the pressure on security measures increases. While the use of digital payments methods (such as mobile payment via Apple Pay, Android Pay and Samsung Pay or contactless payment methods such as Visa payWave and MasterPass by Mastercard) has started to become second nature to some, many are still hesitant to go cashless due to the vulnerability of digital systems to fraud and attack. According to the 2018 AFP Payments Fraud Survey, 78 per cent of its respondents' organisations in the United States were hit by payments fraud.

There is no doubt that the cost of fraud is very high – it negatively impacts brand trust and revenue (see the recent British Airways hack as an example). But there are innovative prevention mechanisms that both businesses and consumers can take to safeguard their accounts – and the crux of it is data.

1. Leverage data for pattern recognition: Data is key when looking to combat payment fraud. The use of data can help with early detection of fraud patterns by comparing the frequency of transactions, velocity and size of payments against the behaviour patterns. Payment providers can use these insights to generate real-time automated detection, responses and alert merchants immediately should a possible fraud incident arise.

2. Ensure multi-channel integration:

With the plethora of channels and payment methods, it has now become critical for merchants to have a 360-degree view on fraud activity throughout. By capturing the movement of transactions and payments from all channels and the application of a consistent fraud prevention logic, businesses will be better equipped to prevent hackers looking to bypass traditional detection systems on one standalone channel.

3. Move from encryption to

tokenisation: Tokenisation completely removes credit card data from a company's internal networks and replaces it with a unique, generated placeholder (token) that cannot be reverse engineered. This means that the merchants will only be able to use the token to retrieve the customer credit card information, while the customers' real credit card details are stored in a highly secure facility.

Data can help with early detection of fraud

4. Use of machine learning and artificial intelligence (AI):

As fraud attacks get more sophisticated, there will be an uptake in the use of machine learning and AI to increase the accuracy of real-time approvals of transactions and reduce false declines using automated risk and fraud scores calculations.

The collective use of a layered approach to fraud prevention, including the use of real-time data analysis to detect and prevent possible fraud incidences as well as use of machine learning and artificial intelligence, will be key to making payments safe in a digital world.

IN ASSOCIATION WITH

KALIXA
We live payments

If open banking can take off anywhere, it's here

Chair of the APPG on fintech Adam Afriyie MP says that the UK's history of early uptake bodes well for future technologies

At a supper at 11 Downing Street a few years ago, I was struck by something said by the chairman of technology giant Google. He said one of the key reasons they base so many of their operations in the UK is that “the British public are early adopters”. Obviously there are numerous other factors such as the English language, our culture, the tax system, a skills base which is as deep as it is broad, and an explicit commitment to innovation by the government. But the fact that our people are adaptive and accommodating of new technologies is what makes us the best place in the world for cutting-edge firms to develop new services, experiment, perfect and scaleup to meet global demand.

If open banking is to succeed anywhere, it will be in Britain. Despite the parched phraseology of open banking, fully comprehensible only to technology geeks, the set of financial regulations, protocols and standards represents one of the most ambitious

pro-consumer reforms of recent decades. It heralds a paradigm shift of power from big institutions towards their customers.

I've already seen some amazing companies developing products that will delight consumers. For example, a new firm called Moneybox helps people save money through an app, which rounds up their purchases to the nearest pound and invests the change into a stocks-and-shares ISA. This open data will also help existing fintech companies, such as Swoop, which helps SMEs search for the best opportunities for funding.

However, as with all similar innovations, it relies on these new services being widely embraced to achieve success. If the postulation of Google is correct, the UK should have the best chance of making open banking a success.

It might be seen as disappointing that, six months on, a YouGov poll found that 72 per cent of the British public are unaware of open banking or what it means. But we should not be





alarmed. After all, many people will not be familiar with the term “fintech”, but in 2016 around 16 per cent of online consumers had used two or more fintech services. With the explosive growth of digital banks such as Monzo, Starling and Atom, and forms of contactless payments such as Oyster cards, this figure will be substantially higher today.

The pattern of adoption of open banking products is similar to that of online banking, which began slowly but is now an essential feature used by millions of consumers and institutions. Open banking products are likely to follow a similar trajectory to become an essential standard used across the financial services ecosystem.

A key challenge to the widespread adoption of open banking is the agility (or lack thereof) of the more traditional retail banks in enabling the benefits of open banking to reach the public. Given their frontline role and reach, it is clear they must play an essential role in communicating the benefits of open banking to their consumers.

Open banking is a major innovation for UK financial services and it was inevitable that some banks would not be ready for the transition in time. Open banking has not proved to be an overnight revolution for consumers, and clearly there is still work to be done by the banks in communicating the benefits to their customers. It is only right that politicians and policymakers continue to ensure that open banking is being given the oxygen required to continue to grow and expand. However, we should also be heaping praise on those banks that have taken a lead. For example, Nationwide’s Open Banking for Good challenge is a worthwhile initiative, designed to convene fintech organisations and money advice charities to create apps and services that promote financial capability.

The real potential of new open banking services is a major boost in productivity which will be even more vital to the UK after we leave the EU. If we want to make our way in the world then we need to set the gold standard for other

countries to follow. The aptly named Open Banking Implementation Entity has set standards akin to the IP protocols that underpin the internet. Few people understand them but everyone reaps the benefits. The British standards are widely admired and already being copied and followed by other countries, and I am fully confident that the UK approach will be regarded as the global “gold standard”.

We have a head start in open banking and fintech, but it is not a birthright. We can maintain our number-one slot only if we remain vigilant and determined to swiftly adapt to a fast-changing world.

It is reassuring that both the fintech all-party parliamentary group and the Treasury Select Committee report came to the same conclusion that digital currencies and Initial Coin Offerings (ICO) are the next big areas of fintech that will need to be examined if the UK is to keep its number-one slot in

The UK can set the world’s standards

financial services.

I believe we must accelerate the shift of power from the big banks to the consumer by embracing financial technology. It will bring about a revolution that puts the consumer and the public first with a wide range of services and the ability to switch between banks at the click of button.

Our success can be judged today by how vigorously we promote consumers and hold the big banks to account for implementing and embracing these new technologies. Government has a role to play, but so too does the public in demanding that they be allowed to use these new services without undue hindrance.



The unstoppable transformation of payments

Vivian Galligan, Elavon Europe senior vice president of integrated payments and strategic partnerships, reflects on the shift towards mobile payments, and the effect this will have on customers and companies



Do you think it's realistic that mobile payments will overtake the use of card?

Yes, I think that will emerge over a reasonably short period of time. Mobile payments will continue to grow, but not necessarily only through mobile phones, but also through wearable devices. The technology will embed more deeply into other types of devices that will be as acceptable as your mobile device. I predict that your mobile phone will probably continue to be the primary device, but smart watches, wearable devices, and electronic devices that have multiple uses will all have the ability for payment card data and for payment card activation.

The physical card really only represents a card number, so just an account detail. Apart from that it has no real value. There is some behaviour that is held within the microchips of cards, but this can be embedded into

technology very easily, so we will see huge growth in alternative types of devices in the future.

Do you think this transition is being driven by customers or industry?

I think it's being driven by a number of different factors. Firstly, technology is becoming more available and accessible, and it can be implemented so much faster. When something becomes available through an app, every user on the planet can access it straight away, so the distribution scale is enormous. Secondly, this change is being accelerated by the marked difference in customer experience, particular in terms of creating new ways of fulfilling payment, but in other areas as well; it's helping to fulfil roles that were previously performed manually.

The airline industry is a great

IN ASSOCIATION WITH





example: where boarding and ticketing was previously fraught with queues and process, it's now self-serviced and self-managed. And I think this links into the third driver: control. The technology-enabled customer experience is attractive to people because they have more information on their finances, information on their terms and they have the choice and control over how they use it.

Has the rise in mobile, convenience-centric shopping damaged brand loyalty?

I don't think brand loyalty has been damaged yet, but I think what will emerge is that those well-established brands will have to increasingly embrace the use of technology in order to stay relevant. Brand choices are obviously made by customers who are attracted to a brand for a number of reasons, and more commonly,

technology is an added ingredient to those choices now, so I think a lot of brands will need to understand where technology fits into their brand profile.

What is the risk to businesses who don't keep up with payments progress?

Businesses that are lagging behind risk losing relevance in the long term, and some of their identity which opens up their businesses to competition. The priorities of today's customers are changing drastically. Using technology to facilitate the customer experience is imperative, as well as making the process as frictionless as possible from the end users' perspective. If merchants fail to meet customer demand or the requirements of their partners to provide these capabilities, businesses risk losing valuable business in today's highly competitive market.

What methods do you use to accelerate your partners' growth, and their adoption of new technologies?

At an early stage we are fully involved in our partners' strategies, and plan with them to understand more about their business. We work hard to agree with them on the strategy, and commit to objectives to facilitate their growth, and we have teams of people available to service the partnership from a relationship or technology perspective. We have a lot of clarity on the final payments model that is being deployed.

Simultaneously, we are constantly developing technology and product roadmaps, to make sure that while we are implementing something today, we are also looking to the future every time we engage with our partners. It's so important to understand what the next release of technology or software in their area is, and we always have an eye on what's coming round the corner.

At its heart, Elavon is a partnership-orientated organisation. We have a strong portfolio of technology partners, serviced by a fantastic team of individuals who are completely focused on meeting our clients' objectives, and aiding their growth.

Can you give an example of integrated payments being used to the best effect?

A recent partnership between Elavon, 3C Payment and the NH Hotel Group is a great example of powerfully changing the customer experience. NH wanted to implement new technology systems throughout its 167 hotels, including a new payment solution to service 400 payment terminals. We successfully helped them to achieve a specific vision for their customers, to consolidate suppliers and to centralise a lot of their supply chain. We met these objectives by implementing a pan-European integrated and automated payment solution and creating a highly efficient check in/check out encounter.

For more information, visit:
www.elavon.eu

Compliant, secure and usable: can KYC have it all?

Andrew Bud, chief executive and founder of iProov, explains how stringent Know Your Customer (KYC) controls can be improved, while reducing frustrating and laborious processes

The recent estimated \$8.3m fine potentially faced by Danske Bank has delivered an important message to the financial sector: strong anti-money laundering (AML) processes are not optional. Danske Bank has admitted that up to \$235bn worth of transactions through its Estonia branch between 2007-2015 may have been suspicious. The scandal has not only led to the resignation of CEO Thomas Borgen, but sent shockwaves through the European financial sector.

It is clear there needs to be a re-evaluation of many current AML systems. However, there is a real danger of sacrificing a solution's usability to create a security pantomime, which has all the bells and whistles to reassure users (and internal stakeholders) but doesn't in practice ensure strong identity proofing.

Intrusive face verification approaches looking to detect "liveness", the user's genuine presence, force users to perform high-friction tasks which are difficult to follow and easy for a genuine person to fail. Users do not want to blink three times and read ten numbers when opening a new current account from their mobile phone. Nor does anyone want to wait a week to complete the journey after posting a scanned copy of a passport signed by a solicitor. These onerous processes disrupt the customer journey and cause high user dropout from the on-boarding experience. New solutions following KYC regulations saw an increase in on-boarding time

by 22 per cent in 2016 and an expected additional 18 per cent in 2017. Not only is this troublesome for the consumer, but it is also incredibly expensive for banks to maintain, with some institutions spending up to \$500m annually on KYC. Meanwhile, many of these "secure" solutions have been comprehensively and publicly spoofed by synthetic video. This catches KYC providers in a death spiral as they make the enrolment more and more complicated, so that in the end the only successful claims are those by synthetic video DeepFake bots.

Many of these challenges can be met by using secure face matching with strong anti-spoofing. Such technology helps banks prove the genuineness of a customer while linking them to an identity document. Critically, users must be able to perform the face scan inconspicuously and with minimal instructions, to reduce cognitive load. The solution must be server-based to function as a secure second factor which is totally device-independent, and forensically auditable for strong compliance proofing. iProov offers that. Our trusted authentication of the remote user meets KYC standards without placing a high demand on the user. Our Flashmark technology generates a unique sequence of colours that illuminate the users' face for 2.5 seconds. The rich set of cues provided allows us to verify the remote user, whilst determining their presence.

iProov technology is effective against highly sophisticated attacks, including replicas, replays and the emerging trend of DeepFake videos. On top of providing trusted security, our solution is highly intuitive for the user and can be operated across devices, allowing effortless on-boarding and future cross-platform customer authentication. Our clients include security-conscious organisations such as the Department of Homeland Security, the Home Office and ING, who have already identified the advantages of usable and secure KYC to enrol customers easily and verify them securely.

IN ASSOCIATION WITH



Bitcoin has strayed a long way from its anarchic roots

Bitcoin started life in 2009 as an obscure, anonymously created digital asset, a new form of money favoured by hacktivists and others who valued the anonymity it guaranteed. On dark web drug-dealing websites such as Silk Road, it was the only means of payment. In the aftermath of the financial crisis, bank bailouts and quantitative easing, this new, decentralised currency was based on a free-market libertarian desire to create a means of exchange divorced from the control of governments and central banks. Bitcoins were not backed by states but “mined” by users, who paid for them with electricity and computing power. The blockchain logs all bitcoin transactions: when bitcoin is exchanged, its “distributed ledger” is updated. Nothing tangible changes hands.

For crypto-evangelists, bitcoin and its ilk will free us from the grip of central banks. But removing the power of state-backed institutions to adjust the money supply (by raising or lowering interest rates or printing new cash) leaves governments impotent in the face of economic crises. For all the faults of the British capitalist superstructure, it was the massive monetary stimulus injected into the economy by the Bank of England – through QE and slashing rates – that prevented the 2008 recession turning into a giant depression.

But bitcoin’s rise in value took it from the bedrooms of anarcho-libertarians into the arena of international finance capital. After the credit crunch and slow recovery from the near-collapse of the international banking system, investors looked for higher rates of return than



Cryptocurrencies can never live up to their promise, writes Jonny Ball

they could find in traditional markets. In February 2011, a bitcoin (BTC) traded at \$1. By its peak on 15 December 2017, 1 BTC was worth \$17,900. A week later it had lost a third of its value; 2017 registered several drops of 30 per cent or more in the space of 24 hours. Today, 1 BTC is worth around \$6,000.

The cryptocurrency’s extreme volatility prevents its widespread use as a currency. If you’d converted your savings into bitcoin in December of last year, you would now have lost most of them. If you’d taken out a mortgage in bitcoin in 2011, you would now be paying back 599,900 per cent. As a stable store of value for savers or borrowers, then, it is useless. Few have used bitcoin as a means of exchange and far fewer have done more than to merely exchange it for other currencies. Buying things with bitcoin – or at least things available outside of the dark web – is uncommon. When bitcoin’s price rises, it indicates nothing more than the confidence of an increasing number of people that its price will rise. As a purely speculative asset, it has no intrinsic value; it is worth what people say it is worth.

At a recent hearing of the US Senate Committee on Banking, Housing and Community Affairs earlier this month, the economist Nouriel Roubini described cryptocurrencies as “the mother of all scams and bubbles”, and the underlying blockchain technology as “the most over-hyped – and least useful – technology in human history.” Investors and techno-utopians should take note, before enough people start to realise that the emperor is wearing no clothes.

#OWNYOURHOME
PROPORTUNITY.CO

10^{YR} SOONER ✓

15% BIGGER ✓

40% CHEAPER ✓



PROPORTUNITY