banking technology

The definitive source of news and analysis of the global fintech sector | **June 2021**

www.fintechfutures.com

THE ONLY ONE IN THE ROOM
Why diversity among executives is still a problem

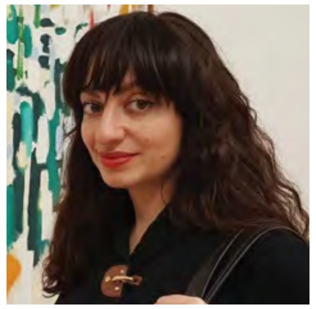
OPPORTUNITY KNOCKS
Banks should take advantage of the new normal

THE FUTURE OF FINANCE?
Decentralised finance products could be a game changer

Produced by
FINTECH FUTURES

IN THIS ISSUE

EDITOR'S NOTE



Tanya Andreasyan
Managing Director &
Editor-in-Chief,
FinTech Futures

The past month has been a mammoth one as investment poured into the tech start-ups around the world that cater for the financial services industry.

Germany-based stock trading firm Trade Republic raised $900 million in a Series C investment round, dwarfing its other three fundraises to date and putting its valuation at more than $5 billion. Prior to this, the 2015-founded fintech had pulled in about $95 million. Co-founder Christian Hecker says Trade Republic is building "the bank of the future" (it already carries a German banking licence).

US-based Forter landed $300 million in a Series F funding round, valuing it at $3 billion. The latest round comes just six months after completing the $125 million Series E, and Forter claims it is now the world's most valuable privately held fraud prevention company.

Another US tech provider, Zeta, secured $250 million from SoftBank. This Series C funding round – one of the largest single investments in a banking tech start-up globally – values the vendor at $1.45 billion.

Zeta has ten banks and 25 fintechs in eight countries on its client list. Among them is India's HDFC Bank and France's Sodexo, an issuer of employee benefits and rewards (and a minority investor in Zeta). Ramki Gaddipati, Zeta's CTO and co-founder, says the banking industry "needs systems reinvented with security, privacy, scalability and reliability as the core foundations".

In the UK, smaller – yet notable – funding was raised by card start-up Curve. The paytech, which describes itself as a "financial super app", closed the largest ever equity raise on crowdfunding platform Crowdcube – raising nearly £10 million from 11,795 investors. Curve's initial target of £1 million was smashed within ten minutes of the round opening on 25 May; in just under three hours, it had raised £6 million.

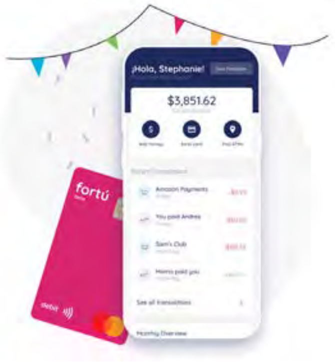
Curve says the last year has been "transformational", with its customer base doubling, the volume of processed transactions increasing by more than £1 billion to £2.6 billion, and more than 100 new staff hired.

Check out our funding round-up on page 28 for other lucky recipients of funds.

As always, there is lots more from the world of banking and tech on the pages of the magazine. We hope you find this edition interesting, informative and useful!

NEWS ROUND-UP

New challenger Fortú comes to the US



Fortú, a new Miami-based challenger, says it aims to build culturally contextual financial services and meet the unique banking needs of Latinos and Hispanics in the US.

Fortú was founded by Charles Yim, a former Amazon Web Services and Google executive, and Apolo Doca, who previously helped build Lemon Bank in Brazil.

Fortú says its team is a mix of first- and second-generation immigrants with personal ties across Latin America. The challenger has so far raised $5 million, spending the last year in stealth mode building its product.

Its banking services are underpinned by LendingClub Bank, which operates under federal banking law. For its payment processing services, it has opted for Galileo Financial Technologies, a US-based payments technology provider.

UnionBank plans total cloud migration with Amazon Web Services

UnionBank of the Philippines is moving its entire IT infrastructure to the cloud with Amazon Web Services (AWS), aiming to become the first financial institution fully operable on the cloud in its home country.

UnionBank is a legacy AWS customer, and kicked off a transition to the cloud three years ago. It currently deploys the vendor's Simple Storage Service (S3), Glacier and AWS Marketplace platforms.

In 2019, UnionBank said it was saving PHP 20 million ($418,000) through its migration. It expects to generate extended savings of up to 30% over the next five years, with a return on investment within 18 months.

Once the migration is complete, UnionBank will run almost 400 applications on the cloud. The bank says it will also migrate 900 virtual machines to VMware Cloud on AWS.

Existing platforms moving across include the bank's Infosys Finacle core banking system and SAP HANA enterprise cloud.

Figure Technologies raises $200 million to hit $3.2 billion valuation

US-based blockchain fintech provider Figure Technologies is closing a $200 million Series D funding round, at a $3.2 billion valuation. 10T Holdings and Morgan Creek Digital are co-leading the round.

Mike Cagney, co-founder and CEO of Figure (*pictured*), says his firm aims to "reinvent the financial services industry" with blockchain technologies.

Figure uses Provenance, which is a public, open source, permissionless, decentralised blockchain. The platform hosts its digital asset marketplaces, such as home lending, capital table management, fund management and administration, as well as banking and payments.

HSBC launches multi-currency business wallet to rival providers

HSBC has launched a multi-currency wallet for businesses to hold, send and receive cash sourced or directed abroad.

Companies can use the wallet via desktop and mobile within the HSBCnet application in the UK, US and Singapore. Users can see and fix the exchange rate before they make the payment. At present, the wallet includes US dollars, euros, UK pounds, Canadian dollars, Hong Kong dollars, Singapore dollars and Australian dollars.

HSBC aims to tap medium-sized businesses with international supply chains. The idea is to eliminate the need for business customers to use third-party providers for their international transactions.

Arrests made over UK "smishing" texts scam

UK police have made eight arrests following a series of operations targeting individuals suspected of sending out "smishing" texts. These scam messages aim to steal people's personal and financial details by directing recipients to fake versions of websites of trusted organisations, such as Royal Mail.

The arrests formed part of a week of action led by officers from the Dedicated Card and Payment Crime Unit, a specialist City of London and Metropolitan police unit funded by the banking and cards industry, in partnership with Royal Mail and the telecoms industry. Operations were conducted across London, Coventry, Birmingham and Colchester resulting in eight male suspects being arrested on suspicion of fraud. The suspects are believed to have been involved in sending out scam texts primarily posing as Royal Mail, which claim the recipient needs to pay an outstanding postage fee for a parcel or input their details to rearrange a delivery.

During the searches, valuable intelligence was gathered and several devices suspected of being used in smishing scams were seized. The unit also recovered numerous customers' financial details.

Seven of those arrested have been released under investigation, with one suspect charged and remanded in custody ahead of a court appearance. The police have said that ongoing investigations are expected to result in further arrests and charges.

American Express fined for sending four million unsolicited emails

American Express has been handed a £90,000 fine by the UK's Information Commissioner's Office (ICO) for sending four million unsolicited marketing emails to customers.

Between 1 June 2018 and 21 May 2019, American Express Services Europe sent more than 50 million emails. According to ICO, over four million of these counted as unwanted marketing emails designed to encourage customers to make purchases on their cards that would benefit Amex financially. These subscribers had not provided adequate consent to receive such content.

Amex was in breach of its interpretation of the UK's Privacy and Electronic Communications Regulations (PECR). Not only had it not reviewed its marketing model following customer complaints, but it rejected those complaints saying the emails were servicing ones and not marketing or promotional.

Andy Curry, ICO's investigations head, calls Amex's arguments "groundless". He describes the incident as "a clear example of a company getting it wrong", and adds that Amex is "now facing the reputational consequences of that error".

JP Morgan, DBS Bank and Temasek to launch payments platform

JP Morgan, DBS Bank and Singapore government-owned investment firm Temasek have teamed up to create a new joint payments venture. The newly established blockchain-based company is called Partior, which means "to distribute and share" in Latin.

It aims to disrupt the traditional cross-border payments "hub and spoke" model and create a more efficient digital clearing and settlement platform. The venture also intends to develop wholesale payments rails for digital assets. Or as JP Morgan describes it, "digitised commercial bank money".

To begin with, Partior will facilitate flows between Singapore-based banks in US and Singapore dollars. It later plans to expand into new markets and currencies.

European Payments Council searching for fraud prevention system

The European Payments Council has kicked off a search for a Malware Information Sharing Platform, which would support real-time fraud information sharing. This follows the council's announcement in February 2021 that it would provide this facility as part of a strategy for addressing fraud risks in the context of the Single Euro Payments Area (SEPA) payment schemes.

The platform will provide direct browser access by all payment scheme participants. The European Central Bank, as overseer of the SEPA payment schemes, had previously recommended that the European Payments Council should develop an early warning and sharing system for specific fraud cases and broadcast fraud-related information to all scheme participants.

FINTECH FEED

TWEET DECK Follow us @FinTech_Futures

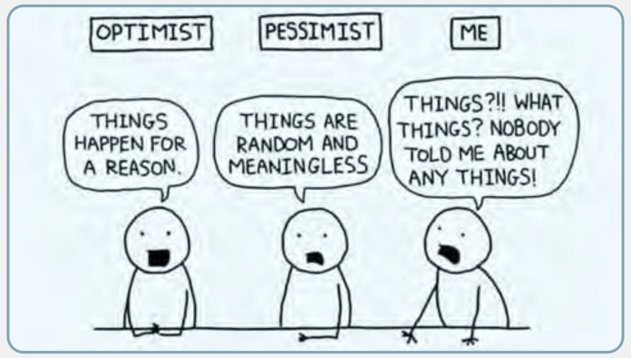
Faisal Khan
@babushka99
If you're holding on to any of the doggy coins, this might be soothing to your ears.

How Much Is That Doggie In The Window - Patti Page
How Much Is That Doggie In The Window Patti Pagehttps://shop.spreadshirt.es/Rwlf/https:...
youtube.com

Adam Singer
@AdamSinger
"I've put the entire family net worth into Gamestop options, we can't lose!" -Tristan, 14, Fidelity beta user who figured out how to transfer funds from his parent's account.

Caitlin Kelly
@CaitlinKellyNYC
Re-watched The Big Short (2015)...in which Brad Pitt's character comes down an airport escalator wearing...an N95 mask. How prescient.

Theo Priestley
@tprstly
Life.



Chris Skinner
@Chris_Skinner
When you lose the most, buy.
When you gain the most, sell.
#Simples

THE NUMBER GAMES

$2.5 billion
in cash and stock will be paid by Bill.com, a provider of cloud-based back-office payment software, to acquire spend management firm Divvy

$610m
raised by Toronto-based wealth management platform Wealthsimple – seven times the size of its last fundraise (which closed in October 2020 at just $87 million) – marking it as one of the largest technology investments in Canada to date

200,000
users have been acquired by Lili, a US-based challenger banking service for freelancers, alongside the $55m fundraise in its Series B funding round

10,000
jobs will be cut by Commerzbank as a deal has now been reached with its employees, with €225 million set aside to fund this

€1bn
will be paid by HSBC for New York-based PE firm Cerberus Capital Management to take the bank's loss-making French branches off its hands

1,000
staff to be hired by HSBC for the front line of its Asian wealth management arm by the end of 2021

To read more about any of these stories, visit *www.fintechfutures.com/type/news*

THEY SAID IT...

"It's very easy to throw the rock at TSB and say, 'these guys crashed in 2018.' But compare this company to the market. Larger institutions seem to have more tickets that are customer incidents that are reported to the regulators."

Suresh Viswanathan, COO, TSB

TRENDING

When is a bank not a bank?

The UK regulator, Financial Conduct Authority (FCA), has issued a letter to CEOs of non-bank firms demanding they make it clear they are not banks. The FCA says in the letter: "We are still concerned that many e-money firms are not adequately disclosing the differences in protections between their services and traditional banking."

In particular, it cites that the Financial Services Compensation Scheme (FSCS) does not apply to non-bank firms. This means cash stored with e-money firms isn't insured to the same extent it is by a bank.

Companies have six weeks to write to their customers to make it clear how their money is protected, and they must separate this notice from any other messaging or promotional activity. The communication must be "clear, fair and not misleading", the FCA states.

The FCA isn't the only regulator reigning in non-bank firms. Last month, France's Prudential Control and Resolution Authority (PCRA) issued a statement that the term "neobank" must necessarily qualify a credit institution.

Facebook's carpe diem moment

Facebook-backed Diem Association, the digital currency project formerly known as Libra, will now operate out of the US. Diem announced it has withdrawn its application for a Swiss payment licence, which it filed in May 2020. Instead, its US subsidiary – Washington-based Diem Networks US – has partnered with Californian state-chartered bank Silvergate to issue its token.

Silvergate will become the exclusive issuer of the Diem USD stablecoin and will manage the Diem USD reserve. As such, Diem Networks US will register as a money services business with the US Department of the Treasury's Financial Crimes Enforcement Network (FinCEN).

Ran Goldi, CEO at First Digital, which has helped build the necessary payment rails for the Diem currency, says this is a huge milestone as Diem is "finally getting much-needed clarity from regulators, and a clear path to securing regulatory approval".

Bahrain and US settle up

Central Bank of Bahrain plans to pilot a digital currency settlement project with US bank JP Morgan and local, Manama-based Bank ABC.

The three entities will test an instantaneous cross-border payment solution, which will see funds transferred – in digital US dollars – between Bahrain and the US, on behalf of buyers paying their suppliers.

The idea is to eliminate the need to hold funds prior and cut down the time to originate a payment.

Rasheed Al-Maraj, the central bank's governor, explains: "Through this pilot, we aspire to address the inefficiencies and pain-points which exist today in the traditional cross-border payments arena". Sael Al Waary, Bank ABC's deputy group CEO, calls this a "landmark pilot" and says digital currencies "will play a critical role in enabling the future digital economies".

Commerzbank sheds jobs

German banking giant Commerzbank has reached a deal with its employees over a job cutting plan that will see 10,000 roles lost.

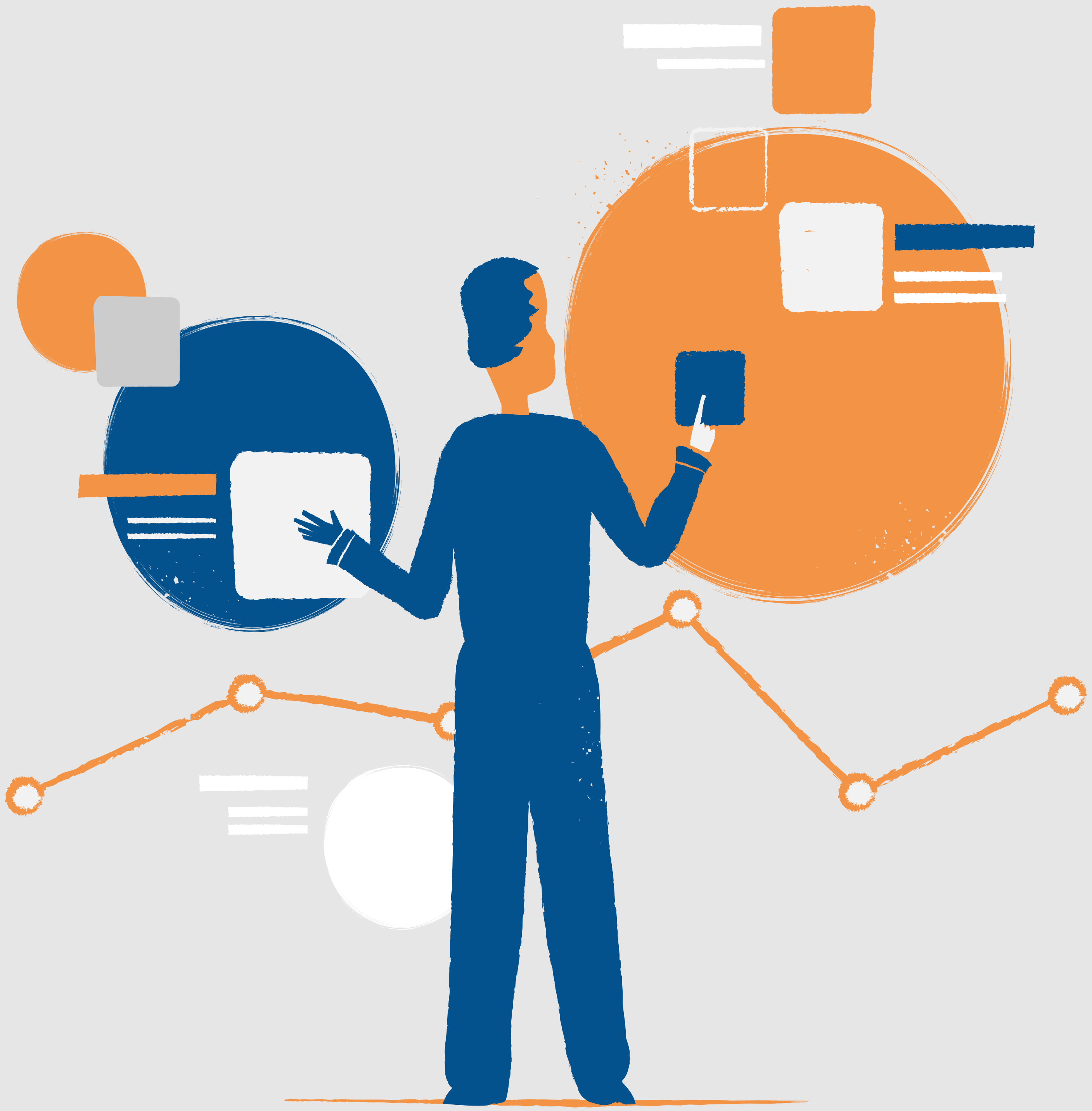
The 10,000 job cuts will be made primarily through the offering of early retirement to staff. The bank is setting aside €225 million to fund this. The agreement is part of new chief executive Manfred Knof's plans to bring Commerzbank back into the black.

The previous CEO Martin Zielke and chairman Stefan Schmittmann resigned in July 2020, as a result of the pressure from vocal Commerzbank shareholders, major investor Cerberus Capital Management and German trade union Verdi.

The bank lost €2.9 billion in 2020, and new CEO Knof has got to work since joining at the start of 2021. He is leading a planned €1.8 billion restructuring that, in addition to a major workforce reduction, will also see the closure of hundreds of branches.

Banking-as-a-Service: who is it for?

By Andrew Arwas, head of corporate development, Chetwood Financial



INSIGHT: BaaS

As regulation, technology and changing consumer demands continue to drive innovation in the financial services industry, we are starting to see a significant uptick in Banking-as-a-Service (BaaS) offerings.

However, while the Something-as-a-Service styling has its roots in technology – for example, Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS) and Infrastructure-as-a-Service (IaaS) – BaaS should not be misunderstood as simply the next technology model in that series.

BaaS goes well beyond classic outsourcing models such as information technology outsourcing (ITO) and business process outsourcing (BPO). In these models, businesses rent core platforms and business operations to avoid the time and cost of building their own and also to benefit from the economies of scale that a small business cannot achieve alone. But ultimately, the business still needs to design and run the products and back them with their own capital.

AN END-TO-END BUSINESS

That's where BaaS differs. With the BaaS model, the service being rented is a full end-to-end product business offered through the use of application programming interfaces (APIs). It includes the technology and operations, but also product and service design, regulatory compliance and risk management. Typically, it also runs on the balance sheet of the BaaS provider, meaning that a user does not need to raise the money to fund and secure their new product offering.

So, who is BaaS for? At its most basic level, it is for any business with a strong brand and customer base, for whom more value can be leveraged by offering banking products, such as lending and credit card services.

We identified **three** principal groups of businesses who could benefit from BaaS.

The first are **financial services businesses** that do not currently offer banking products – or, at least, not the full suite of banking products their customers might want. Insurers and wealth managers, for example, have built relationships with their clients in their respective product areas but cannot offer loans, credit cards or deposit accounts, as they do not have the required regulatory permissions. These businesses have all the key ingredients to originate a healthy flow of product business – a strong brand, solid customer relationships, well developed contact channels and customer relationship management systems – but they don't have the means to manufacture the products.

"BaaS is a frictionless enabler providing a fast and simple means to access financial products, without shifting the customer out of the brand or the purchase journey."

Andrew Arwas, Chetwood Financial

Similarly, some financial services firms may be capital constrained and therefore not able to self-fund the growth of a lending portfolio. For these businesses, BaaS provides a route to offer a range of credit-based products, fully funded and capital backed. What's more, BaaS providers who are licensed banks themselves will be able to generate funding at retail deposit rates, rather than having to use wholesale funding, which comes at a considerably higher cost.

The second group are **organisations outside of financial services**, which have **large customer, member or fan bases** where the brand offers access into financial services. Many sports clubs, trade unions and professional societies have the brand strength and trust to support offers of branded financial services products from select and trusted partners. We've seen this model most commonly in the credit card market with affinity programmes, which gives us a sense of the value opportunity that can be addressed by offering BaaS to a broader industry set.

A third area for BaaS is where **banking products are required as a secondary element** to the primary product sale. This type of offering is already common across the retail, automotive and telecoms industries, all of which offer financing alongside high-value purchases, for example a lease on a car or a loan for a sofa. Buy-now, pay-later (BNPL) is becoming an increasingly significant element in the retail proposition, and BaaS offers proven, professional management of this element, rather than it being managed on the side.

As developing technology continues to inspire entrepreneurs all around the world to provide new innovative services, these secondary financing needs will only expand further and entrepreneurs should be empowered to include the financing element from inception. That is where BaaS comes in.

BaaS is a frictionless enabler providing a fast and simple means to access financial products, without shifting the customer out of the brand or the purchase journey. It also offers entrepreneurs a way round the often-onerous regulatory frameworks that come with these types of financing products, leaving it to the banking experts.

Despite the naming style, BaaS is not just the next technology model from cloud providers, nor is it a straightforward outsourcing service of technology and operations. It's the ability to take advantage of a full end-to-end product business, with all its expertise, regulatory permissions and financial capital, to the benefit of both businesses and the consumer. And all available at the end of a single API call.

Why banks need to embrace the new normal

By Anna Hamilton, VP, customer lifecycle management, FICO

One year after the COVID-19 pandemic first left many of us working from home, celebrating holidays via Zoom and spending more than ever before on e-commerce, media streaming and food delivery, too many financial services executives are still asking the same question they did at the beginning: *when the pandemic recedes, will things go back to how they were before or will we have to adapt to a new normal?*

This is the wrong question.

Back to normal isn't an option because the banking industry's definition of normal – universal financial services built on top of a branch-based distribution strategy – hasn't been normal for the majority of customers *for years*.

The pandemic has not significantly changed the preferences or behaviours of most financial services consumers. It just made it impossible for banks to continue ignoring those preferences in order to sustain the status quo.

The data backs this up. Every two years, the Federal Deposit Insurance Corporation (FDIC) publishes a massive study on how US households bank. One of the questions they ask is, "what is the primary method you use to access your bank account?". In 2019, the majority of Americans (57%) relied on digital channels (mobile and online banking) as the primary way to access their bank accounts.

This shouldn't come as a surprise. Nor should the fact that a majority of the 21% of consumers that used the branch as their primary channel in 2019 were over 65. What might surprise you is that between 2017 and 2019, the percentage of consumers over the age of 65 that relied on branches actually decreased by 5.9% while the number of these consumers who relied on mobile increased by 5.7%.

Fast forward one year – do you think, in the middle of a pandemic in which many bank branches are closed and older Americans are rightly exercising extreme caution, that there is any way that the percentage of consumers aged 65+ using digital channels hasn't continued to grow?

No way.

In the FDIC's next survey, in 2022, the data will no longer offer banks relying on a branch-centric distribution strategy a place to hide. It will be abundantly clear that they are relying on an operating model that none of their customers want.

Given this inevitability, banks need to seize the pandemic as an opportunity to finally embrace this shift, moving beyond token digital transformation projects and putting in the hard work and sacrifice necessary to truly become digital banks.

I believe this hard work and sacrifice will fall into three main categories.

1. CULTURE: ACTIVELY INVITE PARTNERS AND DEVELOPERS

Shopify recently announced that it is partnering with Stripe to offer business bank accounts through its e-commerce platform, a development that undoubtedly disappointed a number of banks that might have aspired to be Shopify's partner in that endeavour.

As others have written, the future of digital banking is embedded. And the companies that are embedding financial services into their websites and platforms – whether it's Shopify working with Stripe or Peloton working with Affirm – are looking for partners that are, at a cultural level, easy to work with.

If banks want a seat at this table (and they should), they need to build a culture that goes beyond compliance and risk management to one that is actively inviting to external partners and developers.

2. ORGANISATIONAL STRUCTURE: INCENTIVISE ON THE RIGHT STRATEGIC OUTCOMES

Organisational structures create incentives, and incentives drive behaviour. This, more than strategy or technology or budget, determines the success or failure of digital transformation initiatives.

Disney knows this, which is why it recently announced a strategic reorganisation that will disentangle content creation from distribution.

"Given the incredible success of Disney+ and our plans to accelerate our direct-to-consumer business, we are strategically positioning our company to more effectively support our growth strategy and increase shareholder value," says Bob Chapek, Disney's CEO.

"Managing content creation distinct from distribution will allow us to be more effective and nimble in making the content consumers want most, delivered in the way they prefer to consume it.

"Our creative teams will concentrate on what they do best – making world-class, franchise-based content – while our newly centralised global distribution team will focus on delivering and monetising that content in the most optimal way across all platforms."

The intent of this reorganisation, painful as it may be for certain stakeholders inside

> "The pandemic has given banks a window of opportunity to… position themselves for decades of profitable growth and value creation."
>
> **Anna Hamilton, FICO**

the company, is to ensure that the Disney folks creating content would no longer be incentivised to distribute their best products (big-budget films and prestige television shows) through legacy channels (cinemas and broadcast TV) when the company is trying to orient everything it does around its new digital distribution channel (Disney+).

For banks, the question is this: *how does your organisational structure affect your strategic outcomes?* For example, if the credit card division has its own customer service agents, then that division may not embrace the digital self-service tools that customers and the larger organisation prefer, because they are incentivised to ensure that those agents always have work to do.

3. BUSINESS MODEL: ENABLE NEW, DIGITAL-DISTRIBUTION MODELS

This category is the hardest to embrace. Implementing new business models built around disruptive technology is incredibly difficult because it often requires trading short-term revenue for long-term value creation. That's usually unpalatable for market incumbents, as Clayton Christensen, the renowned academic and business consultant who developed the theory of "disruptive innovation", explained:

"By and large, a disruptive technology is initially embraced by the least profitable customers in a market. Hence, most companies with a practiced discipline of listening to their best customers and identifying new products that promise greater profitability and growth are rarely able to build a case for investing in disruptive technologies until it is too late."

But that's where the unprecedented disruptions we've experienced over the past year present an opportunity – the preferences and behaviours of companies' best customers have been forcibly changed. This gives companies a rare opportunity to turn into the skid, so to speak.

In the movie business, that might look like eliminating the theatrical release exclusivity window in favour of streaming. As the Wall Street Journal writes:

"Warner Bros… signalled Thursday that the entertainment industry's future isn't in the theatre, but in the living room. The AT&T-owned studio said it would release its entire 2021 slate of theatrical films simultaneously in theatres and on its HBO Max streaming service, the most drastic step yet taken by a major studio as the coronavirus pandemic continued to move Hollywood's focus away from movie theatres and toward in-house streaming services."

In banking, it might look like consolidating fees and other revenue streams into a subscription service:

"If you can justify $13.99/month for Netflix, $9.99/month for Spotify, $6.99/month for Disney+, $39/month for Peloton, $14.99/month for Calm, $100/month for wi-fi + cable, $70/month for wireless, $50-$250/month for a gym membership, $12.99/month for Amazon Prime etc… what would you be willing to pay to optimise your financial life?"

NOW OR NEVER

None of this is easy. Creating a culture that enables new, digital distribution channels through partnerships won't happen overnight. Building an organisational structure that is aligned with a single strategic vision requires a lot of uncomfortable conversations and internal disruption. Seriously experimenting with new pricing, product bundles and business models usually entails some level of short-term revenue cannibalisation.

But the pandemic has given banks a window of opportunity to finally do what is hard; to position themselves for decades of profitable growth and value creation.

The question that remains is this: *how many banks will embrace this challenge?*

What are the opportunities in open finance?

By Ruby Hinchliffe, reporter, FinTech Futures

Open finance is coming to the UK. But what are the opportunities? And what's already been put in place?

US software firm Envestnet | Yodlee hosted a discussion with *FinTech Futures* and three financial sector experts to explore the "open finance landscape and draw comparisons with its older sibling, open banking.

Envestnet | Yodlee offers account aggregation services. The difference being, it opens up access to a wider variety of accounts than many of its peers – such as investment and pension data. Its markets cover the UK, Australia, India, the US and South Africa.

SETTING THE SCENE

The Financial Conduct Authority (FCA), the UK regulatory body paving the way to open finance, started an advisory group in 2018 – the same year open banking went live – to anticipate the next wave of innovation. Then in 2019, the FCA launched a consultation on open finance which ran through into 2020.

What is open finance? Put simply, it will allow firms to plug into more account types than what open banking currently permits. So instead of just customers' banking accounts or credit card data, firms will be able to access customers' utility, investment or pension account data too.

To make this happen, the FCA is putting together a trust framework. This will also apply to government-led projects such as digital identity cards.

"The FCA has been incredibly forward-thinking," says Ghela Boskovich, head of fintech and regtech partnerships at Financial Data and Technology Association, and founder at FemTechGlobal.

> "Open finance ultimately opens up the financial wellness landscape [because] everyone benefits from it."
>
> Jason O'Shaughnessy, Envestnet | Yodlee

THE SHIFTING LANDSCAPE

As the changes under open finance begin to take hold, the financial services landscape is set to shift. But how?

Jason O'Shaughnessy, head of international markets at Envestnet | Yodlee, thinks "open finance ultimately opens up the financial wellness landscape" because "everyone benefits from it".

He adds: "Open banking is a great first step. But we're still limited to data from bank accounts and credit cards."

Each industry will be variably affected by the changes open finance brings. Tessa Lee, managing director at moneyinfo, works with fund managers.

She explains that for them, thus far, open banking has been a tactical solution, rather than a core proposition. But she envisions open finance will be a lot more useful to them.

"I hope there's foresight in how it's [open finance] implemented, so that we don't take a step back before we take a step forward," she says. "This is what we have done with open banking a little bit."

Boskovich adds that open finance will likely "up" the application programme interface (API) game. So far, API quality has remained a large point of contention between fintech start-ups and incumbents.

HOW CUSTOMERS WILL BENEFIT

There are plenty of use cases for open finance. For businesses, Lee points out that aggregated data on the scale open finance proposes will give her customers "peace of mind".

If wealth managers can instantly gauge a good picture of their customers' financial lives, then it is far easier for them to manage that wealth and spend more time building rapport.

The appetite is certainly there for open finance in the wealth management space, according to Lee. She also cites the broader scope of data access open banking brings as being more directly applicable to them than what is available under open banking.

Boskovich highlights two consumer-focused cases. One is fair credit checks, which mean customers use lenders that are an appropriate fit. The second is utility bills information blended with payment data, which could underpin automatic switching services – seriously heating up competition.

> "Banks that choose to obfuscate, drag their heels and resist the open banking model will continue to struggle even more so under open finance. Incumbents have to play ball, or they'll be eaten by their competition."
>
> Ghela Boskovich, Financial Data and Technology Association, and founder of FemTechGlobal

O'Shaughnessy adds that there is an education piece to open finance, too. He cites a future where apps can enable those which are not educated on the fundamentals of money to still benefit from the system and reduce their debt – be it their own or inherited.

"This is when open finance does truly breathe some great innovation," he says.

PLAY BALL, OR GET EATEN

Banks are likely wondering whether they should be worried about the opportunities open finance is presenting for their competitors – be them fintech start-ups, fellow banks or Big Techs.

O'Shaughnessy points out that incumbents are already figuring out the benefits of open banking, which bodes well for open finance.

Lee thinks banks "can look at it in one of two ways". Either "as a threat which dimidiates them and takes away their customers" or "as an opportunity".

"I think it [open finance] gives them [banks] as much opportunity to innovate as anyone else," she says.

Boskovich agrees. And she thinks "banks that choose to obfuscate, drag their heels and resist the open banking model will continue to struggle even more so under open finance".

"Incumbents have to play ball, or they'll be eaten by their competition."

> "I hope there's foresight in how it's [open finance] implemented, so that we don't take a step back before we take a step forward."
>
> Tessa Lee, moneyinfo

WHAT IS THE REST OF THE WORLD DOING?

Open finance is not just a concept fast approaching the UK. It is a movement taking hold of the world.

"Australia has gone straight to open finance," says Boskovich. "They decided open banking was incredibly limited."

In the US, California's Consumer Privacy Act sparked a federal proposal by Kirsten Gillibrand that edged America closer towards open banking.

Elsewhere in North America, Canada is looking at consumer directive finance. While in South America, Brazil and Mexico have leapfrogged into open finance, even though they might still be calling it open banking.

Over in Nigeria, Kenya, and South Africa, the banks are ready for open banking, which is currently being spearheaded by lobbying bodies.

In the Middle East, countries are still setting up the frameworks – with Bahrain and the UAE being the furthest ahead.

O'Shaughnessy does point out, however, that those banks creating European-type open banking feeds do risk copying some of the bad UX experiences, too.

But by and large, the innovation is vast and taking many different forms. "It is definitely a tidal wave that covers the entire globe," says Boskovich.

You can listen to the full discussion here (available free on demand).

The thing about diversity

By Leda Glyptis

I have been working in finance for almost 20 years and I have been "other" for exactly as long. When I first arrived, I felt that I needed to catch up with my peers who had been climbing up the greasy pole over the past four years while I was buried in comparative constitutional amendments and hunting down nationalist monuments and iconography in rural Turkey (I didn't have to look very hard, to be fair – they are everywhere but, hey, any excuse for a road trip).

Then, I was keenly aware of my foreignness.

It was a novelty act. Guys, Leda doesn't just have a funny name. She is "first generation", as a colleague loved to say.

It took a few months to notice my other "otherness" but it hit me like a speeding train. I stood up to go grab lunch, go to the photocopier, go to my boss' office… I don't even remember. But I stood up and looked across the floor of desks and saw… men. Just men. Only men. Nothing but men. And I turned to my colleague and said to him, "all I see is dudes" and he laughed and said, "you are talking to the only brown face in the room". And so I was.

That was 20 years ago but his voice rang loud in my head when, this summer, I read an article called "The only one in the room", recounting the experience of being a black executive in 2021. *Plus ça change*.

THE THING ABOUT SPEAKING UP

My mum used to tell me this poem when I was a kid. And I will paraphrase it because I am refusing to look it up, the memory of her voice is so ingrained in my head I want to remember it authentically if not accurately. And it went like this: "First they came for the Jews and I did not speak up, for I am not a Jew. Then they came for the communists, and I did not speak up, because I am not a communist. And so it goes. Until they came for me. And there was nobody left to speak up for me."

The first time I was involved in a diversity meeting, I realise now, I was not expected to speak. I still opened my mouth… twice. The first time I was put in a small box. As a woman, my view on women's issues was… you know. Personal. And we all know objectivity is important. The second time I spoke, I was put on the naughty step. Because I am white. So what do I know about race? Said the other white people in the room.

I will tell you what I know. It is 2021 and Bloomberg just ran with the story that out of 1,500 Goldman Sachs executives in the US, fewer than 50 are black. The gender pay gap is alive and well and I am the only woman in most rooms I walk into. So the only thing that has changed over the last few years is my relative seniority in each organisation. And not so much what I do with my voice but how easy I am to dismiss and silence. The small box and the naughty step don't apply to me any more. It's not nothing. But it's not enough.

THE THING ABOUT REPRESENTATION

We have all finally come to accept representation matters. Seeing people who look like you doing things, going places matters. But somehow we took that to be a licence to paint by numbers, tick the box and hope that interracial couples in mortgage adverts on TV are a ballast against institutional racism, and women being cast as senior cops in Line of Duty makes up for the under-representation of women in leadership positions in real life.

A study in ethnic diversity in UK children's books published last year (CLPE Reflecting Realities Report 2020) found that in 2019 in the UK – a diverse society recently proudly announcing there is no institutional racism here – 57% of the characters were white, 5% any potential skin pigment covered by BAME and 38% animals. A talking lion is a more likely occurrence than a brown face at the heart of the story.

In my 20 years in the industry, I have seen diversity stay resolutely a tick boxing exercise and representation become a PR weapon in the pursuit of doing as little as possible for the maximum impact.

I have seen as many talking lions as black executives in my time here and the only place where I walked into a room full of decision-makers who happened to be women was Oslo. Everywhere else has a diversity problem and you know how they deal with it?

With diversity targets. But you know how those targets are set?

They are not population averages. They are industry averages. So the story book equivalent would be to have 5% non-white, non-animal minor characters in each of your publications and you are golden. Let that sink in for a moment.

Why do companies do this? Are they bad people? Are they all sinister white men? Or are they HR professionals who don't want to take on a task they don't know how to successfully complete and why risk under-performing on a personal level by taking on a target that will become a millstone around your neck in an industry that does no better than your lot anyway?

So don't talk to me about representation. Because it becomes its own death sentence if what was meant to be precedent is nothing more than a highly visible exception.

THE THING ABOUT RBG

Ruth Bader Ginsburg was famously asked how many women is enough women on the Supreme Court bench and she said nine. That's all of them. And you know what my first reaction was when I saw that quote?

I gasped. Were we even allowed to say that? Were we allowed to hope for that?

Something happened in my head that day. Something major shifted in my own perception. If it is possible to have nine men, it should be possible by a process of absolute meritocratic selection to have nine women. In fact, it should be easier, as there are a few more women than men in the world.

Digest that for a second because we are not moving on. That's the whole story.

Until you can potentially and entirely accidentally – not by design, positive discrimination, quotas or affirmative action but a pure meritocratic selection through a competitive process and a diverse talent pipeline – end up with a team that is all non-white, non-binary, non-predictable individuals, then you have work to do. We have work to do. Until it is possible and it doesn't have to be engineered. Until you can find them and they can find you and it is possible for a room full of decision-makers to be all non-white, non-male without it being a conscious act of defiance, then we are nowhere near done.

THE THING ABOUT MERITOCRACY

About here starts the White Man's Lament.

Yes, but. We shouldn't be penalised for the bigotry of generations long dead. True. There should be meritocracy, it shouldn't be a handicap to be a white man. Also true.

Also totally not the point.

Because in my dream world of access, you could still end up with an all-white, all-male team, if they were the best for the job. But the fear that, if we let other people play, exclusion is inevitable, can only mean one thing: that those who benefit from the system today also see the dice are loaded and the cards marked. I get the fear of not wanting to be at the receiving end of that. It ain't pretty.

Frankly, I am done making the business case for diversity or pandering to the "yes, but". You can pack up your little violins, we are no longer engaging in that conversation because I have finally wisened up to the fact that you are not listening to our answers. Your concerns are not objections to be addressed, they are obstacles meant to distract and slow us down. And it's working. It's working way too well and has done for way too long.

I shouldn't need to explain that I have nothing against white men any more than I should have to say that the best people should always get the job. The implied assumption that the only way a white man would be dethroned entails a compromise on meritocracy has defined our conversations for way too long.

THE THING ABOUT DIVERSITY

The thing is, representation matters, of course it does. But it doesn't matter as much as access.

If your business thinks of success as hitting industry averages, you are part of the problem. And frankly, unless I see 27% talking lions in the boardroom by next quarter, I am so done with this mathematics.

The thing about diversity is choice.

And what that reveals about our institutions ain't pretty.

We live in highly diverse societies. We work in highly non-diverse industries.

The only way you get to this is by an active choice to only let some people in. The only way you stay this way is through an active choice to not to better. And for the avoidance of doubt: setting yourself industry average targets is part of that choice. And the thing about choice is that it is active and intentional. And you can stop. Now. Were you to choose to.

And unless you are bringing me talking lions, you will continue finding me uncooperative and difficult and vocal and unforgiving of your poor choices. And entirely unwilling to let you get away with pretending it's not a choice.

Me and my talking lion mate are so done with this. *#LedaWrites*

Leda Glyptis is *FinTech Futures*' resident thought provocateur – she leads, writes on, lives and breathes transformation and digital disruption. She is a recovering banker, lapsed academic and long-term resident of the banking ecosystem.

All opinions are her own. You can't have them – but you are welcome to debate and comment!

Follow Leda on Twitter (@LedaGlyptis) and LinkedIn (Leda Glyptis PhD). Visit our website for more of her articles.

ANALYSIS: MACHINE LEARNING

Spoil the magic: machine learning in fintech

By Professor Michael Mainelli

Every futuristic statement about fintech feels compelled to invoke the incantation of "artificial intelligence (AI), big data and blockchain". Roald Dahl did say, "those who don't believe in magic will never find it", but has the financial services industry lost its unsentimental, hard-headed knack for disbelief?

Outside of cryptocurrencies, blockchain has turned out to be either smooth sales patter for consultants or what it really is: a boring data structure that provides independent and authoritative timestamping.

Big data has turned out to be an enormous headache that consumes much resource yet delivers only sporadic value.

AI is turning out to be a poisoned goblet that turns financial institutions into unethical oppressors chaining historic data to future prejudices.

AI is a field of research developing machines to perform tasks ordinarily requiring human intelligence. AI fulfils Douglas Adams' definition of technology: "Technology is a word that describes something that doesn't work yet." Researcher Rodney Brooks complains: "Every time we figure out a piece of it [AI], it stops being magical; we say, 'Oh, that's just a computation.'"

In a sense, all complex applications, such as maps on smartphones or predictive text only a few years ago, begin as magic technology to outsiders and rapidly become expected utilities.

Financial institutions rarely want to deploy stuff that doesn't work yet. Arthur C Clarke's aphorism, "any sufficiently advanced technology is indistinguishable from magic", should guide financiers. It's one thing to talk about the "golden goose" at the core of your organisation; it's quite another to believe there really is an off-colour fowl making everyone rich.

Nothing in your business should be magic; it's just nice if it looks like magic to outsiders. We're talking about machines.

BREAKING THE SPELL

Machine learning (ML) research is related to AI research, developing applications that improve automatically through experience from the use of historic data. But it's not magic, and not new. Most of the basic techniques of ML were set out by the end of the 1970s, four decades ago. However, the techniques required three things in short supply in the 1970s, namely lots of data, lots of processing power and ubiquitous connectivity. Data, processing and connectivity grew enormously since 2000 and ML algorithms have flourished.

Anywhere data, processing and connectivity grow we can anticipate ML to flourish. Take video-conferencing's recent explosion. Since the COVID-19 pandemic, ML systems can now access huge recorded libraries of human interactions in a controlled environment. They've never had this quantity of recorded person-to-person video and audio interaction. Anticipate large-scale simulations of people in video conferences, perhaps an automated secretary and note taker – "Alexa, this comment is not to be minuted" – and suites of ML software to support the real people among the simulations.

Within financial services, in the front, middle, back and plumbing offices, ML has an important place. It's one thing to use external ML – for example, using your smartphone to turn speech into text – and quite another to develop the applications yourself. Financial services firms need to develop such applications themselves when they are the source of the data.

DATA DRIVING NEEDS STATISTICAL GUIDERAILS

My firm has deployed ML systems in finance for more than a quarter of a century, with some of the original systems still in place. We style our systems as useful for dynamic anomaly and pattern response. ML systems should know what to do with patterns they've seen – for example, routing orders – and inform humans about anomalies – for example, an unusual trade.

One important thing we've learned over that time is that you want to "spoil the magic". These are machines, not magicians. We're feeding them training data using old techniques. We then ask questions based on some test data to see how predictive things are. The skill here is not the programming, not the networks; it's managing the data that fuels ML.

Spoiling the magic means really understanding what's going on and where it can go wrong. To understand what's going on means being ruthlessly analytical about describing what the data really is, what the machine is doing with the data, how new data is added, how old data is removed, how everything is calibrated and recalibrated, and when to turn off the machine.

Our experiences in areas such as consumer behaviour prediction or revenue targeting have show that many times people don't know the sources of their data. In one example, a raft of data on commercial lending had credit ratings in it, but no-one knew where the ratings had come from. It turned out it wasn't credit rating data at all. Someone, seeing a bunch of AAAs and BBBs assumed it was credit rating data and had relabelled it. Some years later it transpired that the data column was really just a sorting column.

Perhaps the most difficult task is knowing what the machine is doing with the data. A classic tale in ML from University of California Irvine is an application that successfully distinguished wolf pictures from dog pictures, until the researchers gave it pictures of dogs on snow and realised the machine was really picking out canines on snow as wolves; if not then it classified the canines as dogs.

Before deploying one stock exchange application we developed, we kept probing hard on its inability to predict share liquidity. The application was working above the necessary threshold for deployment, but we held back uncomfortably for nearly two months to understand why the remaining mistakes were random. What we uncovered was a hitherto unknown, somewhat shoddy, systematic three-month delay by the exchange in updating industry classifications for its listings.

Adding data, deleting data and recalibrating ML models are frequently mundane tasks left to the programming team. This can be a mistake. Changes to the training data change the ML application. These tasks are important statistical work. Tasks such as data cleansing or training data selection should be independently checked. There needs to be a clear audit trail on the training data, the test set data, and the states of the algorithm. The team need to have a battery of threshold tests to run every time the training data is refreshed. Too often managers don't manage "technical tasks", resulting in cases of organisations floundering, unable to "roll back" to the previous algorithm when the latest version turns out to be failing because of incorrect data within.

PULLING THE PLUG BASED ON YOUR DISBELIEFS

As ML applications are data driven, they tend to perform poorly when there are rapid changes in the environment. The structure of new data being used for anomaly detection or pattern response doesn't accord with the environment from the training set.

Predicting heart disease from a set of conditions is something that ML applications can do well. Heart disease conditions do change across the population, but slowly. Financial services are fast-moving and the environment is a complex one of interest rates, exchange rates, indices and other information interacting dynamically with large degrees of uncertainty in the accuracy of data and the strength of their correlations. Such environmental change rates require commensurate training data refresh rates.

"When to pull the plug" can be a much more important question than "when is the ML application good enough to deploy". The closer applications are "to the market", the more likely their off switches need careful attention. We've seen trading firms lose more in one day from ML tools than they ever gained over a lifetime of use.

Mason Cooley described one magic trick: "To make people disappear, ask them to fulfill their promises." By the time we've been through the data asking how it fulfils its promises, the magic is thoroughly spoiled. It might be good to close with an observation from Tom Robbins: "Disbelief in magic can force a poor soul into believing in government and business." Surely that's what financial institutions need to apply: disbelief.

Michael Mainelli is executive chairman of Z/Yen Group, the City of London's leading commercial think-tank.

His book, "The Price of Fish: A New Approach to Wicked Economics and Better Decisions", written with Ian Harris, won the 2012 Independent Publisher Book Awards Finance, Investment & Economics Gold Prize.

INTERVIEW

DeFi: the future of finance?

EQIBank brings together traditional and crypto finance for its customers, while its holding company's fintech, EQIFi, is preparing to launch a range of decentralised finance (DeFi) products. Martin Whybrow investigates

EQIBank is an interesting hybrid, spanning standard digital banking and the world of cryptocurrencies. Alongside it is now a fintech, EQIFi, in the rapidly emerging decentralised finance (DeFi) sector. Is this upstart a one-off or is this what the face of finance will look like in the future? "We strive to be where the future is, connecting customers to the opportunities of today with premier digital banking," it claims.

The bank already claimed to be the world's first global digital player (as opposed to country or region-specific digital banks) and provides services across 180 countries. It is a fully regulated traditional offshore player that is permitted to, among other things, provide custody for digital assets (as well as traditional assets), thereby giving clients the ability to buy and sell crypto while also offering digital asset-linked debit cards.

EQIBank was set up in 2015 with the specific aim of being the world's first global digital bank, says CEO Jason Blick. It wanted to offer more financial solutions to more countries than any other bank. Those services are standard across every country and are focused on corporations and high-net-worth individuals.

The bank now offers current and savings accounts, adding a multi-currency account of late; credit cards; lending, including cryptocurrency finance (using cryptocurrencies as collateral towards a cryptocurrency backed loan); custody; and a range of investment products. Most recently it added cryptocurrency over-the-counter trading.

EQIFi

EQIFi was launched by the holding company of EQIBank. In some ways, DeFi can be seen as peer-to-peer lending on crypto-steroids. In fact, the broad definition is any financial tool that eliminates the need for a centralised body. Blick says the launch followed close monitoring of the DeFi space over the previous two years.

"It is really just an extension of P2P concepts but with more structure around it," he says. "From our perspective, bringing in a licensed institution brings a sense of safety and responsibility and we can offer products that are not already out there."

The DeFi derivatives market really took hold in 2017 with Synthetix, a project that allows people to create decentralised blockchain assets pegged to other assets such as fiat cash cryptocurrency, as well as stocks and physical goods such as commodities. Other DeFi derivative platforms have followed, such as Hegic, Pulse and Mirror.

While still small in the great scheme of things (around $100 billion market capitalisation at present) and not yet well-known outside of this niche, Blick predicts rapid growth. "The numbers and acceleration are very exciting," he says. He believes "people still have trust issues around centralised institutions such as banks". It is also flexible. The DeFi derivatives market allows anybody to create synthetic contracts pegged to other assets, in contrast to standard derivatives. It is maturing, with new products arriving in the last 18 months or so from various players.

EQIBank brings the benefits of a licensed institution to the DeFi sector and will be able to offer a range of products. In June, it plans to launch fixed and variable rate products, the first interest rate swap and a yield aggregator offering that Blick says will be akin to a fund of funds product, underpinned by artificial intelligence and machine learning. By the start of May, EQIFi had received expressions of interest from 1500 people; Blick expects that to be 10,000 by the time of the product launch. EQIFi is banked by EQIBank and this will bring interoperability, bridging the cryptocurrency new world and EQIBank accounts.

What underpins EQIBank and EQIFi? In terms of technology, it has a cloud-based stack that is a mix of proprietary – its client management system, for instance, was wholly in-house built – and third-party. It uses Unido's Insto crypto asset custody service and enterprise platform as its institutional partner for blockchain solutions. Unido Insto is described as a bank-in-a-box solution and uses the supplier's fragmented key signing technology to support crypto custody and crypto trading products.

> "Bringing in a licensed institution brings a sense of safety and responsibility and we can offer products that are not already out there"
>
> **Jason Blick, EQIBank**

In terms of staff, Blick says EQIBank has fewer than 100, including its dedicated customer relationship managers. He feels a traditional bank in this space would have two or three times that number. The digital platform means scale is not an issue and efficiency is also driven by having standard products across the six lines of business.

EQIBank is now offering its platform on a Banking-as-a-Service (BaaS) basis, allowing third parties to white label it. Blick says demand has been so high – largely by word of mouth – that it has pre-sold all of its licences until the beginning of 2022. One of the takers is Canadian conglomerate and fintech investor, Holt, to underpin its digital banking offerings. Holt's new digital banking offering is powered by EQIBank.

About 40% of EQIBank's customers are from the UK and EU, 30% from North America and 30% from Asia, with the expectation that the latter region will increase to 50% by the end of the year.

THE WIDER DEFI OPPORTUNITIES AND CHALLENGES

Blick believes – in an age of negative interest rates – there is an opportunity here for banks but that it will be taken up by "nimble digital banks that are forward-facing" rather than traditional banks with legacy systems and old operating models. "Digital banks, by and large, are not making money," he points out. They are focused on the retail market but DeFi could be a "genuine route to profitability". This might then, in turn, see consolidation, with established banks buying the innovators rather than trying to enter the markets themselves.

Far from leaping in, traditional banks are showing caution. HSBC's recent decision not to enable customers to purchase stock in Coinbase is a reflection of this. Blick describes the decision as "mystifying", with the bank deciding which public stock its customers can and cannot buy. It is one reason why the DeFi space is exploding, he says. HSBC has form here as it had previously banned customers from buying shares in MicroStrategy, a company holding large amounts of bitcoin on its balance sheet.

HSBC is by no means the only bank taking a cautious approach. Big US players such as Goldman Sachs and Morgan Stanley know they need to embrace customer demand for digital assets and are somewhat less reticent. However, it is players such as Silvergate Bank in the US and ClearBank in Europe that have taken a more proactive stance when it comes to offering services to crypto businesses.

There is certainly a cloak of mystery surrounding this sector. "Technologists know what is going on; the rest of the world is looking at this and thinking, gosh, that's complex," says Blick. Among the mystified are regulators, he adds, which lack technologists within their structures.

TRUST, ETHICS AND SECURITY

Mention of regulators does throw up questions about trust, ethics and security in this new frontier. Perhaps those banks that are showing caution have a point.

With DeFi, people do not need to provide personal information such as proof of ID, previous bank statements, national insurance or social security numbers. This is because DeFi projects do not need proof of identity or eligibility.

Another criticism is that blockchain transactions are irreversible, so that an incorrect transaction with a DeFi platform or even deployment of smart contract code containing errors can be hard to correct. The collapse last year of Yam Finance was a sobering one, blamed on a code error after it rapidly grew to $750 million in deposits.

> "We have taken great strides to ensure we are secure from both a technology and regulatory perspective, they are equally important."
>
> **Jason Blick, EQIBank**

EQIBank is registered in Roseau, in the Commonwealth of Dominica, and seeks to emphasise its regulated status. "Since we operate from an offshore centre, we know it is vital we are leading innovators in trust," it states. Blick emphasises that the AML/KYC regulations are as stringent here as in all other jurisdictions.

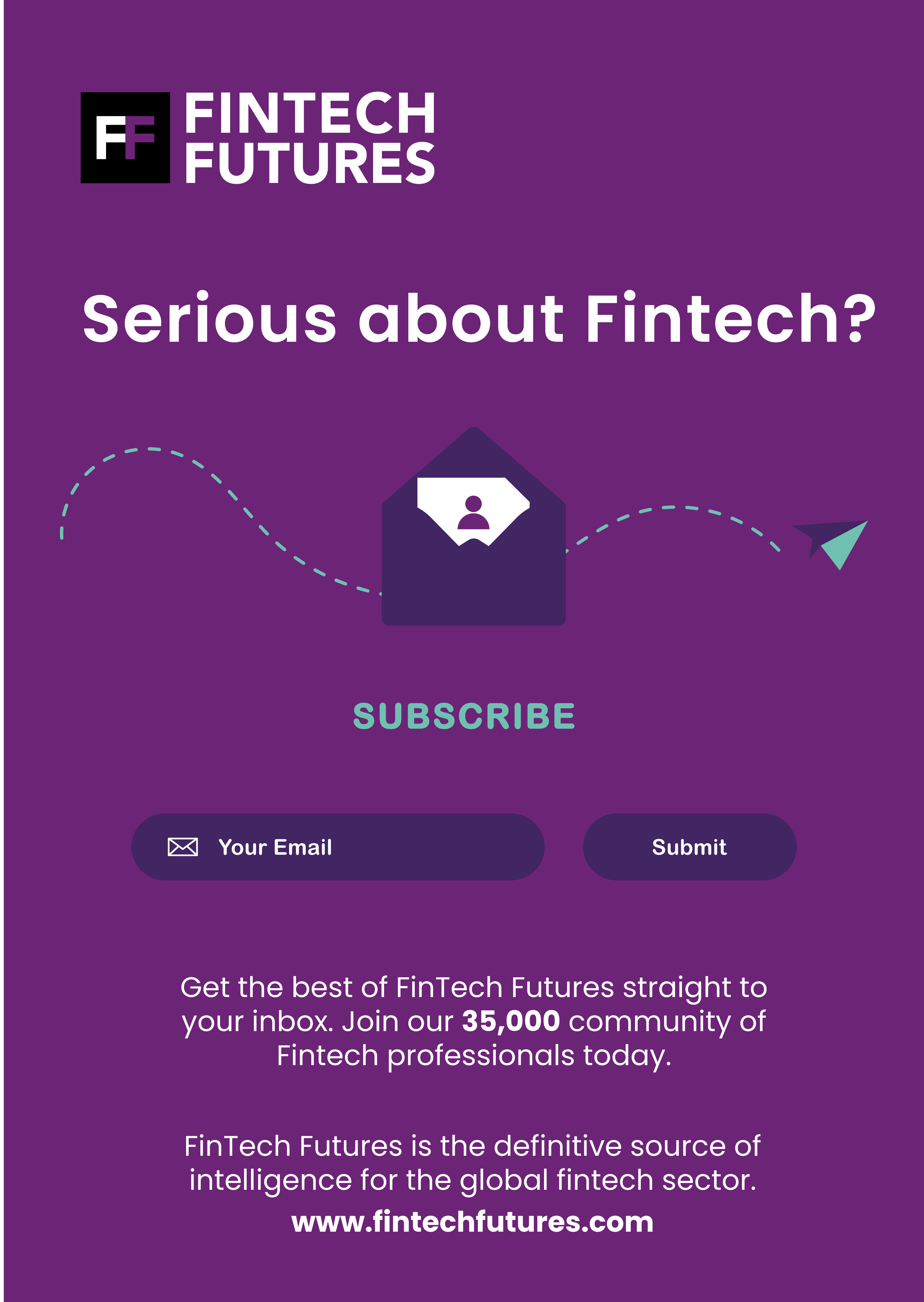
It considered eight jurisdictions, including the UK, but felt that the East Caribbean was "extremely open to innovation and was taking a leadership position". Blick says: "Some smaller jurisdictions are more nimble and more attentive to market demand." He cites the Bahamas, which has been quick to adopt a central bank digital currency. In Dominica, he says, "we have a great working partnership with that regulator".

For EQIFi, it evaluated 30 jurisdictions before opting for the UAE. Bolstered by zero capital gains and zero corporate tax, the country is becoming a powerhouse for fintechs, says Blick, reflected in the hundreds that have already settled there.

On security, Blick points out that the four main players in DeFi to date have a market-cap of $6 billion and have not been hacked "to any degree". DeFi companies are "tech and security businesses". He adds that 40% of EQIBank's spend is on technology and that features such as facial recognition and digital documentation recognition increase the security as well as onboarding times. "We have taken great strides to ensure we are secure from both a technology and regulatory perspective, they are equally important," he says.

Whatever the strengths and weaknesses of this rapidly emerging sector – and it could certainly do without more episodes like Yam Finance – it is likely to become more mainstream. The exploration by additional central banks of their own digital currencies is providing kudos, so too the US authorities' backing of stablecoins, pegged to the US dollar. "When the Chinese central bank launches its digital currency, it could start to nibble at the heels of the US dollar as the currency of last resort," predicts Blick.

The actual levels of trust and safety remain to be seen, so too the extent to which DeFi will grow from its current beginnings and will truly enter the mainstream. For now, it remains an enigma to many and that is certain to be one cause of current caution in a wider cryptocurrency and blockchain sector that has often made headlines for the wrong reasons. EQIBank and EQIFi are out there in this pioneer territory, seemingly making strides in their own right as well as seeking to be evangelists for this emerging sector.



Meet Jake: Gen Z crypto enthusiast

By Dharmesh Mistry, CEO, Askhomey

Last month, 16-year-old Jake ran into his parents' lounge and implored them to buy Bitcoin! His parents had heard of Bitcoin but not investigated it further so were somewhat taken aback by what seemed to be statement out of the blue. However, wind back the clock just a couple of years – when 13-year-old Jake had seen discussions about Bitcoin on Twitter. What caught his eye were tweets and articles on its dramatic prices rises and drops. He remembers the price at that time was a couple of thousand dollars.

Last month he saw a tweet from Elon Musk about Tesla allowing people to buy their cars with Bitcoin and that now the price of the cryptocurrency had risen to over $50,000. Wow! His immediate reaction was that Bitcoin was taking off and there was serious money still to be made. So last week he convinced his mum to set up a Binance account, after looking at a few other exchanges, and buy some Bitcoin and Ethereum. What appealed to Jake about Binance was hearing about its flotation, how valuable the company had become and that it had created its own coin. Having heard this from Jake's father who works in banking, I spoke with Jake and this is what I learnt.

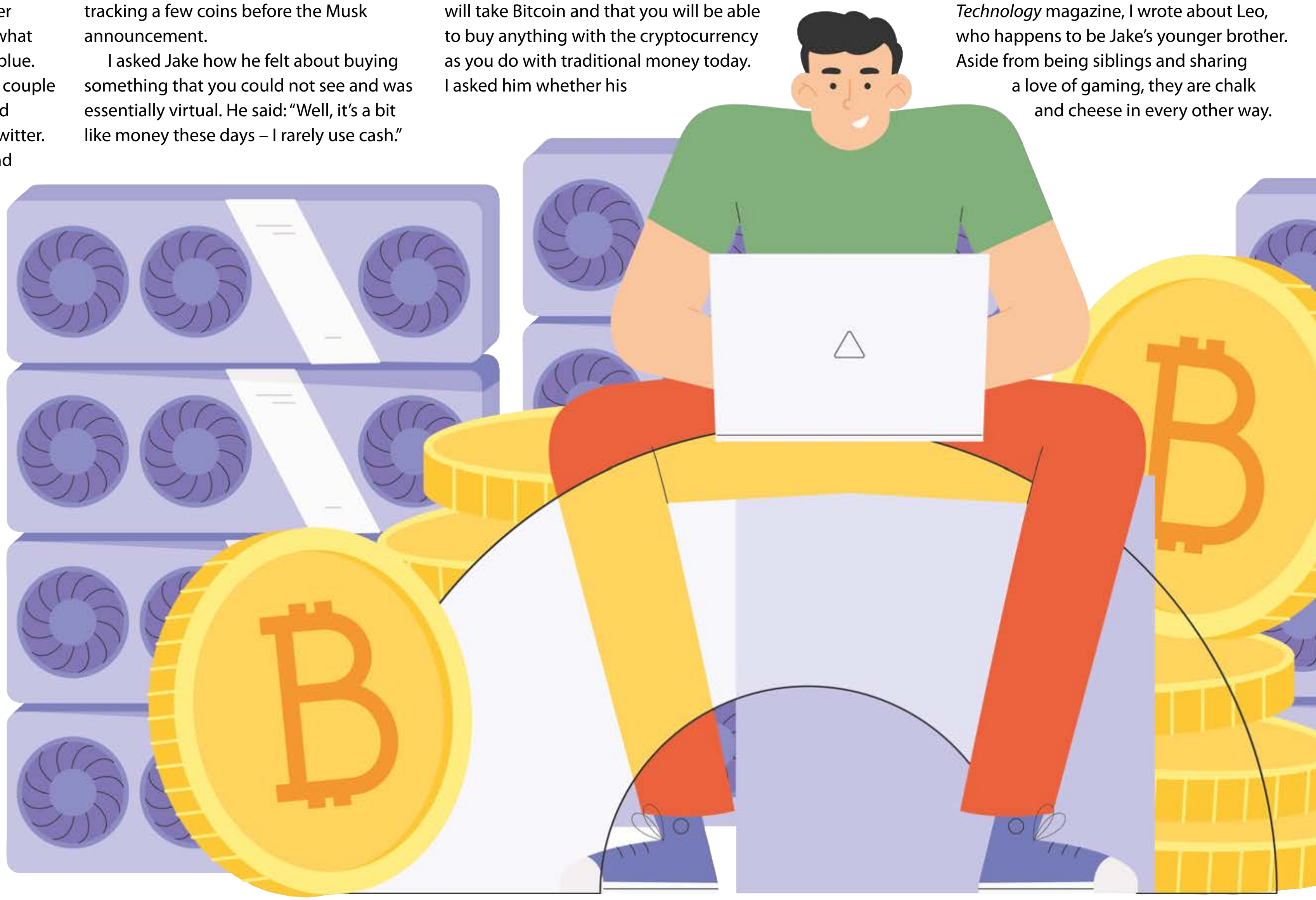
Jake and a friend had already been looking at how they could make money and his friend had recently set up a fantasy share portfolio with his dad. They investigated crypto and were tracking a few coins before the Musk announcement.

I asked Jake how he felt about buying something that you could not see and was essentially virtual. He said: "Well, it's a bit like money these days – I rarely use cash." He spends money online using his bank account and PayPal. "With Bitcoin it's kind of the same – you don't see it, but you can buy/sell and spend it."

I asked Jake why he thought the price will keep going up and he replied: "Well, there are only a fixed number of Bitcoins and one day they will have all been issued, so people keep buying them and that drives the price higher as there are fewer for others to buy." Jake also thinks that as Bitcoin gets more popular, banks will start to offer it, too, and that will drive the price again further. So buying now is still a good investment for the longer term.

Jake thinks in the future, ordinary shops will take Bitcoin and that you will be able to buy anything with the cryptocurrency as you do with traditional money today. I asked him whether his parents and grandparents knew much about crypto and he said they had heard of it but knew little else. "It's quite new and not hugely popular, and because it's based around technology, I think most older people don't know much about it," he mused.

On finishing my interview, Jake reminded me that the views he shared with me are solely his, that they do not constitute financial advice and that readers should be aware that crypto prices can go up as well as down.



DIGITAL NATIVE SIBLINGS

In last month's edition of *Banking Technology* magazine, I wrote about Leo, who happens to be Jake's younger brother. Aside from being siblings and sharing a love of gaming, they are chalk and cheese in every other way.


Jake

> "This generation is already forming an opinion about banks that is not favourable towards them. Have the banks already lost the battle for Gen Z?"
>
> **Dharmesh Mistry**

Jake has no real interest in technology but does want to make money. They are both part of Gen Z and as I highlighted in my article about Leo, they think and act as digital natives. They see a world that is increasingly becoming digital and are not afraid to embrace it. What surprised me with this interview was Jake's view on money and "value", and how he could already see a future for crypto, whether it was Bitcoin or some of the other cryptocurrencies he has found.

Like millennials and their adoption of fintech and neobanks, have Gen Zs already found their equivalents in crypto exchanges and wallets?

Bringing this back to banks, I'm yet to find any strong examples from incumbents catering to the specific needs of Gen Z. What we can clearly see is that they only use banks for fiat currency and mainly to top up their digital wallets such as PayPal.

I'm just saying that this generation is already forming an opinion about banks that is not favourable towards them. Have the banks already lost the battle for Gen Z?

Dharmesh Mistry has been in banking for 30 years and has been at the forefront of banking technology and innovation. From the very first internet and mobile banking apps to artificial intelligence (AI) and virtual reality (VR). He has been on both sides of the fence and he's not afraid to share his opinions.

Dear Luc: Is a multi-currency future on the horizon?

By Luc Gueriane

In this new column, *Dear Luc*, we answer the questions the industry's fintech founders are too afraid to ask, and solve the problems they don't want their VCs to know about.

From regulation readiness to technology teething troubles, our start-up agony uncle, Luc Gueriane, is here to help.

He has more than seven years' experience working with flagship fintechs like Revolut, Wise, Monzo and Curve.

His expertise and extensive work in the fintech ecosystem mean that Luc is able to offer unique insight into the building of a successful fintech company.

Dear Luc, with the world opening up again, do I need to start offering multi-currency to my customers?

We're still a long way from a pre-pandemic "normal" but many countries do seem to be on the road to recovery thanks to the success of vaccination programmes. As such, it makes sense to consider developing new products or services to pre-empt changing customer behaviours as things open up. And as people begin to travel, there will be demand to use multiple currencies.

However, with multi-currency offerings, you must think carefully before diving in. Many products on the market claim to offer multi-currency for users who want to spend money abroad. However, all that is being offered is the ability to spend on your card in multiple countries for an added fee, without the transaction blocked. This is essentially what any Mastercard and Visa card can do and it isn't what I'd call a "true" multi-currency card.

True multi-currency cards are the next step in the evolution of travel money, eliminating the need to carry cash, travel money cards or traveller's cheques. This is where you have a balance in currencies you hold and the cardholder can move balances between different currency wallets based on where the transaction is taking place – or simply what currency they would prefer to use.

Wise (formally TransferWise) and Revolut are examples of companies doing this really well as they actively promote the benefits of spending abroad without any hidden fees.

Offering the ability to receive, send and spend money using a multi-currency account is a great convenience for users travelling abroad. But there are many considerations to think about before deciding if this is the route for your offering. Let's look at just a few of those.

THINK ABOUT YOUR END CUSTOMER

If your product is already in the market, what's included in your offering and why are customers signing up with you already? Where are they and what do their spending habits look like?

While I appreciate that the last year isn't an accurate reflection of international spending, you need to understand if true multi-currency accounts are needed by your users and if this is going to become a key element of your proposition.

In the UK, people took an average of 3.9 holidays per person in 2019, according to Statista research. So, although the number of holidays abroad was on the rise, does the work involved warrant the potential use when your customers are spending on

> "True multi-currency cards are the next step in the evolution of travel money, eliminating the need to carry cash, travel money cards or traveller's cheques."
>
> **Luc Gueriane**

your card domestically anyway?

On the other hand, if you haven't introduced cards to your existing business model but you have a customer base of international travellers with exposure to multiple currencies – DeVere is one example of a company in this situation – it makes complete sense to seamlessly link a multi-currency card to your offering.

Understanding your customers is also especially important as the card schemes have introduced policies to limit the number of multi-currency propositions unless they believe it is a true travel product. Therefore, you would need to prove your reason for needing multiple currencies to be accepted by the schemes.

THINK ABOUT YOUR PARTNERS

Taking your product in a new direction involves working with your partners to ensure you are operating correctly from not only a regulatory standpoint but also a technical one.

For example, you would need to ensure that your selected issuer and processor has the functionality to be able to provide the experience you would like. If your customer has £100 and €100 in their wallets, but they try to spend £200, some processing partners will not have the functionality set up to be able to cascade funds to make the payment.

You must discuss your plans with all your payments partners to understand what restraints you may experience, any additional development work which might be needed, or if any new partners are required (for example, a dedicated FX provider).

THINK ABOUT CUSTOMER SERVICE

Revolut has an amazing user experience (UX). It makes a conscious effort to set the standard for the industry so others benchmark against them.

However, with margins being relatively small when starting out and profitability being a well-publicised problem for fintechs, you need to ensure the cost of delivering new multi-currency isn't outweighed by the cost of supporting customers with using that service.

Exchange rates and fees are not something that everyone understands, so even though the unicorns in this space are doing very well, they will still be experiencing high volumes of questions through customer service.

The cost of answering a simple question such as "why has this spend gone across two different balances?" will likely be more than you made from that transaction. You want to ensure you provide adequate educational information and that your customer service balances are simple to use, and don't cost you money.

FINAL THOUGHTS

There are many positives to having a multi-currency programme, but as with any new project, you must consider the reason you want to make a change. With the fintech world shifting so frequently, it is very easy to get caught up in what additional features you could be providing your clients. However, sometimes it is better to focus on your core competencies rather than offering too many things and spreading yourself thin.

Do you have an embarrassing question you want answered, or a seemingly unsolvable problem you'd want help with? Email *FinTech Futures'* deputy editor, Alex Hamilton at alex.hamilton@fintechfutures.com in confidence.

FINTECH FUNDING ROUND-UP

Laybuy, a New Zealand-founded buy now, pay later (BNPL) firm, has raised **AUD35 million** ($27 million) to speed up its UK growth.

The round is made up of a share purchase plan to existing eligible shareholders in Australia and New Zealand. It will take place in two tranches.

Laybuy launched in the UK market in late 2019 and says it's on track to hit a gross merchandise value of $718 million. It estimates an increase of 90-100% in the financial year ending 2022.

German stock trading fintech **Trade Republic** has raised **$900 million** in a Series C investment round, dwarfing its other three fundraises to date.

Sequoia Capital led the Series C, with participation from six other investors. This included Accel, Founders Fund, Creandum and Project A.

Trade Republic offers commission-free trading to retail investors in France, Austria and Germany. The firm is valued at more than $5 billion, and has more than one million users.

Prior to the Series C, the 2015-founded firm had pulled in around $95 million.

Resolve has raised **$60 million** to grow its embedded billing platform for business-to-business (B2B) companies. Based in San Francisco, Resolve was spun out from buy now, pay later (BNPL) company Affirm in 2019 to focus exclusively on B2B billing.

Its flagship offering is a digital 30-, 60- or 90-day net terms and credit billing solution that "integrates seamlessly" into a B2B company's existing financial technology stack using proprietary single-click embedding technology.

Investors in the round include Initialized Capital, KSD Capital, Haystack VC, Commerce Ventures, Clocktower Ventures and others.

London-based lendtech **Uncapped** has raised **$80 million** in debt and equity. It says the money will go towards launching new banking services "tailored to the needs of digital entrepreneurs". It will also grow its new Visa cards offering and increase the headcount from 35 to 100 people by the end of the year.

Founded in 2019, Uncapped offers growth financing of £10,000-£5 million for a flat fee. Businesses only repay the capital as they make revenue. There's no set repayment and no compounding interest, equity or personal guarantees. No credit checks or business plans are required.

Uncapped has previously raised $40 million from investors including Mouro Capital, Global Founders Capital, White Star Capital, Seedcamp and All Iron Ventures.

Singaporean cross-border payments firm **Thunes** has raised **$60 million** in an extended Series B growth round.

Insight Partners led the round, which also saw participation from GGV Capital, Helios Investment Partners, Future Shape and Checkout.com.

Thunes operates a network of mobile wallet providers, banks and remittance firms, offering "seamless" cross-border payments to and from emerging markets.

The firm claims to connect more than 100 countries and operate "the largest partner network in emerging markets".

Los Angeles-based **ProducePay**, a financing, analytics and marketplace start-up focused on the global fresh produce market, has landed **$43 million** in its Series C funding round.

The round was led by Silicon Valley-based G2VP and co-led by IFC (International Finance Corp) and IDB Invest (part of the Inter-American Development Bank Group). Other participants in the round included current investors Anterra Capital and Coventure and new investors Astanor Ventures, IGNIA and Finistere.

The funding brings ProducePay to more than $300 million raised in debt and equity since its inception in 2014. To date, ProducePay has financed $3 billion of produce across 12 countries in North and South America, and saw 2020 revenue double.

DailyPay, a provider of on-demand pay solutions for enterprises, has secured **$500 million** of capital – a $175 million Series D equity round led by Carrick Capital Partners (with participation from existing investors) and $325 million of credit capital from various sources.

DailyPay was founded in 2016. Its HQ is in New York and the operations are in Minneapolis.

It says it's on "a mission to build a new financial system" and that 80% of Fortune 200 companies that offer on-demand pay partner with it. US corporate giants Dollar Tree, Berkshire Hathaway, Six Flags, McDonalds and Adecco are among these.

In 2020, DailyPay grew its revenue by 141%.

Lithic (recently rebranded from Privacy.com) has raised **$43 million** in its Series B funding round. Led by Bessemer Venture Partners, fellow backers Index Ventures, Tusk Venture Partners, Rainfall Ventures, Teamworthy Ventures and Walkabout Ventures all joined the round.

The New York-based company was founded in 2014. It has built its own card issuing processor and claims to provide "the fastest and simplest way to programmatically create virtual and physical payment cards and monitor transactions". It is now expanding its technology into other business models.

Lithic has raised a total of $61 million to date and has issued more than ten million cards.

Indian merchant payments platform **Pine Labs** has landed **$285 million** in venture funding, valuing the firm at $3 billion.

Featuring in the round are Baron Capital Group, Duro Capital, Marshall Wace, Moore Strategic Ventures and Ward Ferry Management. Existing investors Temasek, Lone Pine Capital and Sunley House Capital also participated.

Founded in 1998, the firm started fundraising in 2009, with an initial $1 million seed injection from Sequoia Capital India. Since then, it has raised $422.2 million across seven more rounds.

Pine Labs serves 150,000+ merchants and has its payments terminal integrated at 20+ banks and fintechs.

Regtech firm **ComplyAdvantage** has received an undisclosed investment from the Growth Equity team in Goldman Sachs Asset Management – an extension of the start-up's oversubscribed Series C funding round last July.

Existing investors include Ontario Teachers' Pension Plan Board, Index Ventures and Balderton Capital.

Founded in 2014, ComplyAdvantage has four global hubs in New York, London, Singapore and Cluj-Napoca (Romania).

It claims more than 500 customers across 75 countries. Among them are US crypto exchange Gemini, Australian payment app Beem It and OakNorth, a UK-based challenger bank.

BukuKas, the Sequoia Capital-backed Indonesian fintech serving small business' digital and accounting needs, has landed **$50 million** in Series B funding.

Just four months after its $10 million Series A, the latest round counts Wise co-founder, Taavet Hinrikus.

Launched in December 2019, BukuKas says it already serves some 3.5 million small merchant and retail users in Indonesia.

Israeli cybersecurity and data analytics firm **ThetaRay** has completed a **$31 million** fundraising round.

New investors include Eric Benhamou, investing through Benhamou Global Ventures, and Saints Fund, which has appointed one of its managing partners as an observer to the ThetaRay board.

Existing investors OurCrowd, Bank Hapoalim, SBT and others also participated in the round.

The latest raise brings ThetaRay's total funding to $112 million, across ten rounds.

"What Swift did to the banking world 25 years ago, ThetaRay will do to the banking world in the next ten years," says ThetaRay board chairman, Erel Margalit.

New York-based investment management platform **Vise** has raised **$65 million** in a Series C funding round. The raise puts it at a valuation of over $1 billion.

Led by Ribbit Capital, the round also saw participation from existing investor Sequoia Capital.

Since its Series A round last year, it increased its assets under management by more than 60 times to more than $250 million, and grew its team from six employees to more than 70.

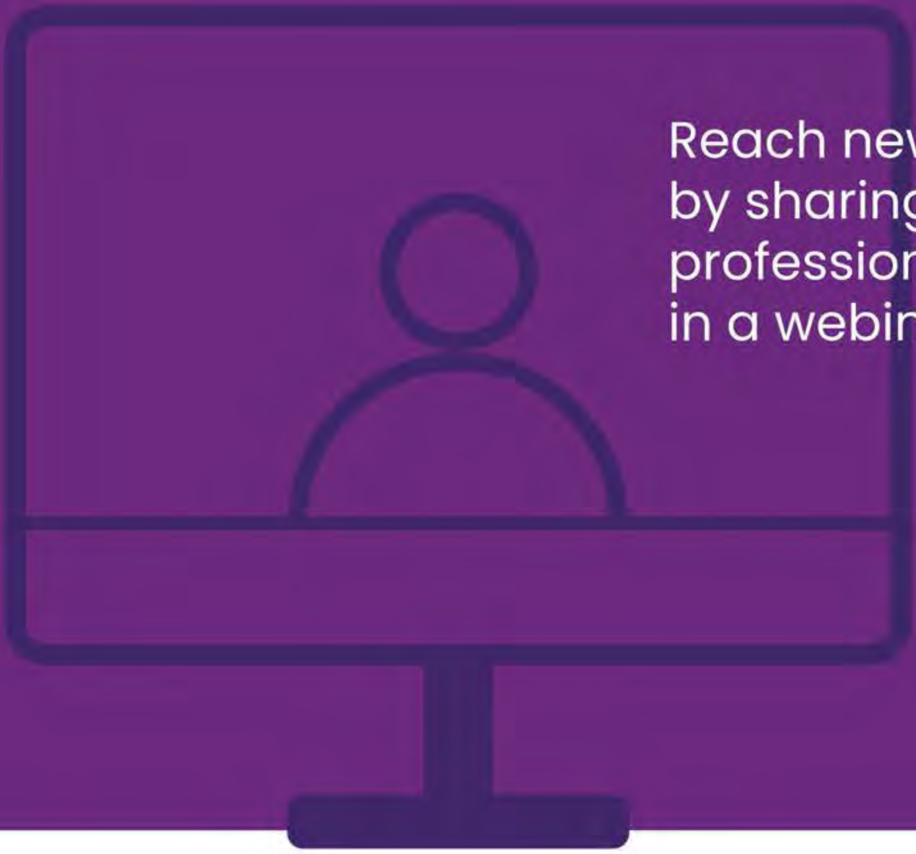
Vise was founded in 2016. Its flagship platform uses artificial intelligence (AI) to automate investment management for financial advisors.

Pipe, a fintech which connects investors to companies seeking capital, has raised **$250 million** at a valuation of $2 billion.

Greenspring Associates led the round, which included participation from new investors Morgan Stanley's Counterpoint Global, CreditEase FinTech Investment Fund.

It pushes Miami-based Pipe into unicorn territory and arrives just two months after the firm nabbed $50 million from a range of investors.

Founded in August 2019, Pipe has raised $316 million in total funding.



MOVERS AND SHAKERS

Lucy Demery

Barclays Investment Bank has recruited **Lucy Demery** as a managing director, responsible for the coverage of the bank's fintech clients in Europe, the Middle East and Africa (EMEA).

Demery joins from Standard Chartered, where she spent six years and left as its global head for fintech banking. Prior to that, she spent time at JP Morgan and New York law firm Cravath, Swaine & Moore.

Reporting to Joel Fleck, global head of fintech banking, she will start her tenure in July 2021.

Core banking technology vendor **Thought Machine** has recruited **Brad Steele** as US general manager and global head of partnerships. Steele joins after a decade at AWS.

UK-based Thought Machine has a stated aim to grow its business internationally and within its last round of funding, in mid-2020, it promised hiring key roles in APAC, the US and Australia.

At AWS, Steele was co-founder and global leader of its Startup Business Development unit, focused on discovering and engaging with entrepreneurs and tech start-ups to encourage them to use the AWS platform.

Ricky Knox, co-founder and CEO of UK challenger bank **Tandem**, is stepping down. Chairman Jeffrey Pritchard says Knox "leaves Tandem with our good wishes". Prior to setting up Tandem, Knox founded two remittance businesses, Azimo and Small World.

He will be replaced by **Susie Aliker**. She spent 14 years at Credit Suisse and, most recently, six years at wholesale bank British Arab Commercial Bank (BACB), where she was appointed CEO in 2018.

Tandem has been one of the many digital banks to have struggled to make any money. In part, the worsening losses were put down to technology infrastructure investments and provisions for defaults on unsecured loans. In September 2020, it shut its credit cards business. Not long after, it rebranded itself as "The Good Green Bank", focusing on environmental banking and lending.

In February this year it acquired the £100 million mortgage book of private banking firm, Bank and Clients.

ProducePay, Los Angeles-based financing, analytics, and marketplace start-up focused on the global fresh produce market, is looking for a "rockstar" chief technology officer (CTO).

"In this role you will serve as a technical visionary, planning for what our needs are for the future while guiding the engineering vision that delivers the overall ProducePay experience on a daily basis," it says in the job advert.

The company says the global fresh produce market is worth $300 billion, yet is "opaque, fragmented and dominated by manual processes".

Since its launch in 2014, ProducePay has financed $3 billion of produce across 12 countries in North and South America, and saw its 2020 revenue double.

It has also just landed $43 million in a Series C funding round.

Tom Harris

UK-based agency bank, **ClearBank**, has looked internally for its new chief technology officer (CTO), appointing head of engineering **Tom Harris** to the role.

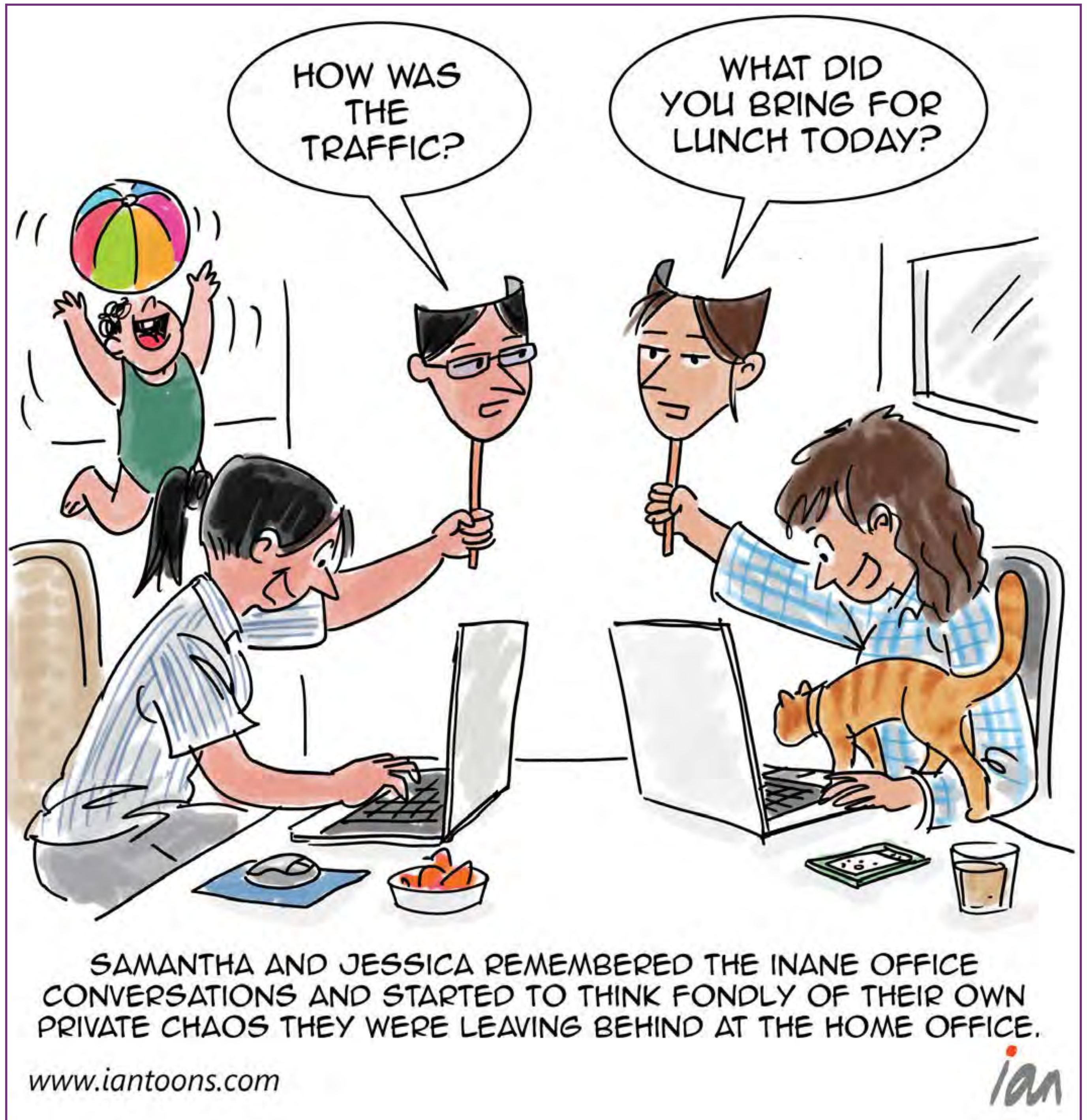
Harris joined ClearBank in 2018 as a software developer and stepped into the engineering role in May 2019. The bank says he has been "instrumental" in its building the technology side of ClearBank.

Joseph Edwin, senior vice president and head of core banking transformation at **Nordea**, has left the bank after six years.

Edwin joined Nordea in 2015 after 12 years at Commonwealth Bank of Australia. He arrived just as the Nordic giant kicked off its ambitious technology overhaul – one of the largest core banking projects in Europe. The bank is working with Temenos to switch over from its legacy Misys (now Finastra) and Tieto platforms.

Nordea announced an IT write-off amounting to €1.3 billion in its Q3 2019 figures, comprised largely of impairment charges.

According to sources at Swedish business paper Realtid, progress is slow on the transformation. Edwin told the publication last year that cost savings from the core switch will appear in results from 2022 onwards.



BACK TO WORK

Cartoon by Ian Foley

The shift back to office-based working: while some tech companies have stated remote working is now part of their culture, recent moves by Amazon and Google, who have built huge office campuses, suggest that a seismic change to remote working may not occur. Google, for example, recently announced that after 1 September, employees who want to work remotely more than 14 days per year must formally apply for it – requesting up to 12 months in "the most exceptional circumstances."

FINTECH FUTURES

EDITORIAL
Managing Director & Editor-in-Chief
Tanya.Andreasyan@fintechfutures.com
Deputy Editor
Alex.Hamilton@fintechfutures.com
Reporter
Ruby.Hinchliffe@fintechfutures.com

SALES
Head of Sales
Jon.Robson@fintechfutures.com
+44 (0)20 8052 0423
Business Development Executive
Sam.Hutton@fintechfutures.com
+44 (0)20 8052 0434

MARKETING
Marketing Manager
Rebecca.Nolan@fintechfutures.com
Marketing Executive
Kiran.Sandhu@fintechfutures.com

ADDRESS
FinTech Futures, 240 Blackfriars Road
London SE1 8BF

PRINTER
Hobbs the Printers Ltd, Hampshire, UK

ISSN 0266-0865