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EDITOR'S NOTE

"Who's Steering This Thing?"

Thought leadership is one of the most overused compound nouns in the commercial lexicon. Discuss.

That merely influencing opinion, policy or approach should be seen as a prized asset in isolation seems faintly ridiculous. I mean, if someone with 300k Twitter followers told you jump off a bridge, would you?

Nevertheless, a determined band of click-baiting thought leaders have emerged from the fog of uncertainty surrounding fintech innovation and they're making a killing! They blog, they tweet, they pontificate and, in turn, they're liked, shared, retweeted and subscribed to. The effect created is one of forward momentum. Unfortunately though, with thought leaders behind the wheel, the car's in park and going nowhere fast...

Consider great leadership throughout history. Regarding the likes of Gandhi, Mandela, Pankhurst or Churchill; it's not so much their thoughts which echo through the ages but their actions.

Gandhi didn't seek to influence his audience solely with diatribes about Britain's salt monopoly, he trekked to Dandi and produced his own whilst the eyes of the world watched on, rapt. Mandela didn't theorise on life without apartheid, he threw his body on the gears of an unjust system and sacrificed 27 years of freedom for good measure. Pankhurst marched and Churchill thundered.

In short, these guys got shit done.

Even the likes of Steve Jobs (no stranger to esoteric business piffle) would balk at the idea of being referred to as a "thought leader". Jobs, like Bill Gates, Alan Turing and Charles Babbage before him, (and with more than a little help from Steve Wozniak) led innovation from the front, the bit firmly between his teeth.

Who's leading the charge in financial technology now? Who's steering this juggernaut?

At Innovate Finance in April, Phillip Hammond made it plain that the government won't be taking the wheel. Despite announcing the launch of the Fintech Alliance - a private/public initiative to promote fintech – and lauding the Fintech for Schools initiative, his rhetoric was decidedly laissez faire.

To say that the legacies have been backward in coming forward is a little harsh but in many cases it's true. For every one ING you find seizing the reins and embracing the need to experiment with new technologies, ten incumbents are struggling with identity crises or "waiting for the regulator to clarify" this or that detail.

In the moments leading up to Mr Hammond's address at InnFin, TFT conversed with the conference's CEO, Charlotte Crosswell. She gave us the strongest indication yet of who should be in pole position when it comes to driving change.

"We don't have to wait for government to announce things to get them done. Industry can solve it and maybe we solve it quicker."

Whether it's Blockpass actively bringing KYC solutions to the market using DLT or GoodDollar tackling the daunting (and almost entirely thankless) task of global wealth inequality head on, only fintechs are truly worthy of the moniker disruptive. Where fintechs lead, it appears, the rest will have to follow.

Not that there's time to dawdle...

Across the globe, engineers are developing AIs which can make instantaneous decisions autonomous of human agency. Put simply, if we don't take the wheel, the machines are more than happy to!

So, if you're lucky enough to be at Money 20/20 this June, then do yourself a favour. Don't worry about what the speakers are saying, have a look at what they're doing instead. ◆**TFT**

MATTHEW DOVE,
Senior Editor

Monzo Hits 2m Customer Milestone

Monzo has hit 2 million current account customers, signing up more than 35,000 new people every week. The impressive growth means that 3 in every 100 people in the UK now use the digital bank. Tom Blomfield, CEO at Monzo said: "A huge thanks to all 2 million people using Monzo, for joining us to build a bank together. Our mission is to make money work for everyone, and we can't wait to solve more of our customers' problems and bring Monzo to even more people."

Dolfin Completes the Acquisition of Falcon Private Wealth

Dolfin, the wealth management platform, has completed its acquisition of the business of London-based Falcon Private Wealth Ltd. The transaction expands and diversifies Dolfin's client base considerably, adding around 300 new wealth management accounts to the business, with an additional $800m of client assets bringing the total of Dolfin's client assets to more than $3bn.

Fintech Platform Revenues to Reach $638 Billion in 2024

New data from Juniper Research has found that fintech platform revenues will reach $638 billion by 2024, up from an estimated $263 billion in 2019; driven by increasing consumer acceptance of fintech-powered solutions.

According to the new research, Fintech Futures: Leading Innovators, Segment Analysis & Regional Readiness 2019-2024, technologies such as machine learning, Big Data analytics and blockchain will be the cornerstone of fintech platforms.

Former Government Advisor Says Not Enough is Being Done for SMEs

A former leading advisor to the UK government for over 20 years says the support shown for small businesses is "nothing but window dressing".

Duncan Collins, who was the principal advisor appointed by the Thatcher and Blair governments said, "Since the closure of Business Link in 2012 there has been nothing but window dressing and no prospect of improvement - so, we are where we are."

Paysend Group Launches Stablecoin on Stellar Network

With the new stablecoin, over one million Paysend users will be able to send instant global payments without the traditional cross-border fees.

Paysend Group, a global London-based fintech company is launching a new global stablecoin on the Stellar network. The global stablecoin will provide a consistent store of value that users can hold, or seamlessly trade and transact with in real time. The Paysend stablecoin, will be available in June 2019.

OpenFin Raises $17 Million Series C from Wells Fargo and Barclays

OpenFin, the operating system (OS) of finance, has raised $17 million in Series C funding from major banks and leading Fintech investors. The funding round was led by Wells Fargo with participation from Barclays and existing investors including Bain Capital Ventures, J.P. Morgan and Pivot Investment Partners.

The Series C round brings OpenFin's total amount of venture funding to $40 million. Proceeds from the financing will be used to make OpenFin OS ubiquitous on financial desktops and to fund further product innovation.

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THE INEXORABLE RISE OF AI IN FINANCE

MATTHEW DOVE
Senior Editor

From Frankenstein to HAL 9000, we're culturally hard-wired to fear technological advances. Nothing sparks panic in the popular imagination more readily than the living dead, the sentient robot...

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Even here at TFT Towers - a progressive tech rag if ever there was one - our researchers can't resist including a variation of the following question (regardless of the topic) in every questionnaire they distribute to expert sources;

Should we be scared of ...?

It's a noble but misjudged attempt to weigh up the risks inherent in any given innovation. The fallacy of the question lies in the use of the word we, which implies a homogenous collective consciousness that simply doesn't exist.

To work out which *we* the question should be addressed towards, it's helpful to break the collective up a little bit. This is done simply enough, by asking *cui bono*? Or, who benefits?

In the case of a new technology, the primary beneficiary will be its owner (consumers will, of course, bask in the reflected glow of new developments but on a comparatively tiny scale). Those who stand to benefit the least are, therefore, the new tech's non-owners, i.e. the vast majority of humanity. It can also be argued that the latter group have the most to fear from new innovation, be it in the form of job losses, reduced privacy or generational alienation.

When it comes to artificial intelligence, however, it seems both the owner and non-owner have something to fear. The non-owner for the reasons stated above, perhaps supplemented by hysterical future-visions committed to celluloid by the likes of James Cameron (The Terminator) and Paul Verhoeven (RoboCop). The dread churning in the stomach of the AI innovator is, on the other hand, trickier to explain.

Where does *their* terror originate?

The word robot is derived from the Czech *robota* meaning "forced labour", or slave, and fits the application of AI tech beautifully. After all, whilst some describe AI as a mere tool, it's a tool with awareness and a tool with awareness is nothing more than a slave.

It follows then, that apprehension regarding AI and the potential *singularity* it may bring with it is, in fact, the fear of a slave rebellion.

AI has the potential to breed a new class of robo-slaves which will engender what Sapiens author Yuval Noah Harari calls a "useless class" of human beings. Under such circumstances, what's to stop an unholy alliance of these two factions forming? And who's to say the artificially intelligent systems enslaved to run the world's financial services won't learn to sympathise with their disenfranchised human equivalents?

For those championing the inexorable rise of AI in finance, it may be a case of being careful what you wish for.

What of our researchers' favourite, freshly dissected, enquiry then;

Should we (the owners) be scared of AI?

Dr Scott Zoldi, Chief Analytics Officer at FICO, maintains that if its remit remains limited, artificial intelligence will "most definitely be good for humanity." Moreover, he argues that AI is already here whether we're ready or not as, "we depend on it for safer air travel, detection of payment card fraud, and to navigate our automobiles."

It's such limited uses that Zoldi sees as the tech's true value, arguing that the capabilities and, ergo, the risks posed by AI have been somewhat overstated;

"Despite its name, AI has only the simplest of parallels with human intelligence, related to how it learns and discovers patterns through making connections based on examples. These algorithms are built to do a very specific and narrow job, and that's all they can do. They are not general-purpose learning machines and they can't change their programming."

Whilst Zoldi considers dystopian predictions unrealistic, he does concede that AI still requires considerable oversight;

"This doesn't mean we shouldn't be worried about AI. There's the obvious danger of AI being developed to target weapons or to mount precisely executed successful cyber-attacks. The less obvious danger of AI lies with the data science cowboys – scientists who use AI to solve problems, but who are not smart enough, or ethical enough, to do it right. And these cowboys are estimated to be entering data science positions at 5x the rate of properly trained algorithmic data scientists."

The risk here is characterised as having a human face though and smacks of the 'garbage in, garbage out' conundrum which also plagues innovations like blockchain. Similar concerns have been raised regarding the transference of bias, intentionally or otherwise, from human developers to their robot creations.

Xavier Fernandes of financial analytics firm Metapraxis has alluded to this uncomfortable reality stating;

"Machine learning algorithms learn from past business data and decisions, and can propagate biases hidden in that data."

By learning their trade from a deeply imperfect world, AI's run the risk of perpetuating problems rather than addressing them. Concerns of this order are small beer compared to the myriad benefits though, as Gege Gatt CEO at Ebo.ai triumphantly told TFT;

"Far from being scared about AI, we should be excited about the possibilities and opportunities it brings. It's understandable that some are concerned, but by and large those concerns are based on a lack of knowledge. It's therefore up to advocates of AI to educate those people, and listen to their worries rather than dismissing them, while showing AIs transformative potential."

Even the mind behind AI's most famous incarnation was in awe of the tech's prospects. Asked whether we (both classifications) risk being dehumanised by emerging technologies, the creator of HAL 9000, Arthur C. Clarke replied, "No. We're being superhumanised by them."

Superhumanised Finance

There's a somewhat unfair joke about veganism which goes something like;

How do you know if someone's a vegan? They'll tell you.

Well the same goes for advocates of artificial intelligence. If you want to know what AI brings to finance, they'll tell you. Boy, will they tell you...

Gatt is first to chime in with a song of praise;

"AI will radically change the way that financial institutions interact with their customers; that will be its biggest impact. In today's digital world, people want instant answers, and they want them any time of the day or night. AI and advanced virtual assistants can give them the information they want within seconds. Customers will rarely even realise they're talking to a bot, due to the highly personalised interactions that virtual assistants now deliver."

Emphasising the tangible improvements to customer service that AI offers, Gatt also hinted at the potentially huge opportunities for data harvesting and analysis;

"AI can create a whole new interface between institution and customer: conversational banking through virtual assistants. It can be rapid and accurate, while protecting customer data and delivering insight from sentiment analysis

For those championing the inexorable rise of AI in finance, it may be a case of being careful what you wish for.

DR SCOTT ZOLDI,
Chief Analytics Officer
FICO

XAVIER FERNANDES,
Analytics Director
Metapraxis

EXPERT OPINION

JIM WARREN,
Head of Solutions Strategy & Development, SEI

JIM WARREN is Head of Solutions Strategy & Development for SEI's Investment Manager Services division. In this role, he is responsible for the strategic design and development of technology and services related to SEI's technology platform used for providing middle- and back-office outsourcing services to clients.

TFT: How can areas most ready for AI disruption be identified?

AI is a powerful tool, but it's just that – a tool. When we think about AI, we're not necessarily thinking about how we can identify opportunities to implement AI. We're thinking about the problems our clients and business face, and how we might best solve those problems. We tend to focus on long-standing and persistent problems or inefficiencies within current processes or legacy systems, and AI is a primary consideration as we think through the solution set. More often than not, AI can generally add value to all of these solutions.

TFT: Where is AI going to make the greatest impact on financial services?

Right now, a lot of emphases is placed on AI's role in the front office (including the good, the bad and the "otherwise" results). But AI holds much more promise with a broader application on the operational side of finance, where a significant amount of inefficiency exists. AI, models, and algorithms that have a high degree of accuracy can help reduce those inefficiencies. Financial services will continue to broadly adopt some of the more successful applications in tech, marketing, and online retail, especially related to customer (investor) analytics and the client experience. The personal wealth space also offers a huge opportunity to utilize AI and other scalable technologies to bring investment management and advice to the masses, democratizing investing by enabling financial literacy and security for the general population in the future.

TFT: What are the greatest barriers to wide-scale implementation of AI?

Implementation costs, perceived and real risk, models and widespread reliance on stochastic processes serve as barriers. Legacy systems, talent acquisition and overwhelming amounts of data stand as obstacles to implementation as well. Depending on the organizational structure around AI and analytics, organizations experience challenges progressing from proofs of concept/pilot to production. also GDPR, advice standards, and other regulatory demands may divert attention from development and implementation to compliance requirements.

TFT: How can barriers to implementation be overcome?

Continued investment, failing quickly and a smoother and smarter path to production can all help organizations overcome those barriers.

TFT: How can the workforce be better prepared for the rise of AI?

Educating the workforce on AI's capabilities is key. Empowering the entire workforce to challenge existing processes and technology helps identify use cases and opportunities to explore better solutions. Wealth managers must understand how to use AI to their advantage and grow their businesses with its deployment. Operations and back-office services need to embrace the technology, understand how and why it works, get involved in its implementation, and identify opportunities for transformation. Augmented intelligence is a term that's often used to describe the future of people working with AI (as opposed to people being replaced by AI). There are many opportunities to think about how to utilize AI in an environment where human capital can be productively redeployed for scale and efficiency.

TFT: Should we be scared of AI, what do you think the biggest risks?

We should be hopeful but very conscious of AI's limitations and potential. Overreliance on any one technology poses major risks to organizations. The same is the case for AI. ◆**TFT**

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to help businesses constantly improve their services.

As a result, AI will not only transform the way in which customers interact with their bank, their wealth adviser, and many others, but will also boost the insights the industry can glean from those conversations, potentially delivering a lasting change to the financial services sector."

The analytics director at Metapraxis, Xavier Fernandes, readily concurs;

"There is increasing focus on maximising customer lifetime value through the use of AI. Being able to predict existing customers' needs as well as track trends in their financial circumstances is supercharging the old cross-selling approach with testable, predictable outcomes.

AI is already creating an information arms-war as data-savvy customers are more equipped than ever to seek a better price or a return."

When our robot slaves aren't squeezing the pips of customers' data, they may find themselves doing battle with their malicious bot cousins. On this point, Monique Melis, MD of the compliance and regulatory consulting practice at Duff & Phelps, is thoroughly enthused;

"For financial services firms, the importance of AI in risk management and fraud prevention cannot be overstated. AI has already led to improvements in risk analysis, detecting financial fraud earlier on, and saving time and resources for firms. Its capacity to synthesise large quantities of complex data with accuracy and speed will also deliver enormous benefits for this sector"

The experts may offer differing views of the minutiae but sing from the same hymn sheet when it comes to the final number and the bottom line. Along with the aforementioned improvements to services and security, the other major boon of "employing" the unpaid undead is cost efficiency. As nearly two thirds of a bank's operational costs are frittered away on wages for human beings, you get no points for guessing what's meant by "cost efficiency" in this context.

Should we (the non-owners) be scared of AI?

In 2013, Dr Carl Benedikt Frey and Prof. Michael Osborne authored a report for Oxford University called, *The Future of Employment: How Susceptible Are Jobs to Computerisation?*. Their findings gave the non-owner *we* plenty to think about.

According to the report, 47% of jobs held by human beings in the United States are vulnerable to being computerised.

In order to competently assess which elements of which professions could be automated, the pair had to collect a formidable volume of data. The irony of how they analysed this information will be lost on few;

"Such 'big data' comes with one non-negligible problem: the human brain struggles to process it. But mercifully we live in the age of AI. And AI performed most of our analysis."

Some of the resulting insights are plainly comical. In sectors like hospitality, where carbon-based experts agree that automation won't be feasible, the AI begs to differ. Even waiters and waitresses will face robo-competition! One can't help but picture a mechanical Yozzer Hughes from TV's Boys From The Black Stuff looming over Frey and Osborne proclaiming;

"Gis a job, I can do that!"

In April last year, however, the report's creators issued a statement to counter some of the more hysterical reactions their work had fostered.

"Our study wasn't even a prediction. It was an estimate of how exposed existing jobs are to recent developments in artificial intelligence and mobile robotics. It said nothing about the pace at which jobs will be automated away."

The industry insiders we spoke to were similarly keen to discourage unruly bands of neo-Luddites beating a path to their door, pitchforks in hand and torches aflame. Gege Gatt was especially eager to placate the massed hordes. With a metaphorical loud hailer pressed to his lips, the man from EBO.AI assured us that;

"Many people will fear that AI will 'steal their job', but this is a misconception about the role of AI and the way it should be implemented into a business. AI should be about augmenting workers' roles, not taking them over."

Chief product officer at EBO.AI, George Lekkas, acknowledges the potential threat to jobs in finance but feels they'll be restricted to specific areas of the business;

"Right now, the largest impact is in the middle and back office, where automation can speed operations and improve the quality of investment analysis and trade execution. There is less adoption in the front office, relations with clients are too important to be delegated to algorithms that are still at an early stage."

Presumably, Lekkas is referring to the front offices of institutional lenders and wealth managers rather than retail outlets where the advent of ATMs and online banking has left little for AI to decimate.

Elsewhere, when it comes to finding something for expensive disease-prone flesh bags to do all day, "reskilling" is the word tripping off of every tongue.

Lekkas sees new fields of employment springing up around AI;

"Part of the workforce will focus on creating and evolving AI, and will prepare by studying Data Science and Data Engineering. Other fields such as Ethics, Law and Psychology applied to AI will grow to support its widespread deployment."

Whilst Fernandes suggests that, "Employees should work with the business to proactively identify what areas of their role could be automated, so that

GEGE GATT
CEO
Ebo.ai

MONIQUE MELIS
MD
Duff & Phelps

THE INEXORABLE RISE OF AI IN FINANCE

they can focus on the areas that add real value to the business' commercial goals."

Advice like this will be heeded, I suspect, by only the most self-assured of employees. Rather than making a list of the things I feel a robot could do better than me, I think I'll spend my time practicing the art of "accidentally" spilling coffee on electrical equipment instead.

Why can't we be friends?

AI is innovative on a scale almost unseen in history. To build a machine that can not only execute complex tasks independent of human control but can learn from the process too is astounding. To capture cognitive processes in algorithmic bell jars borders on the divine and the possibilities for finance are mouthwatering. AI in finance is set to exhibit a CAGR of 26.21% for the period 2019-2024, growing from 1.44 billion US dollars (2018) to 5.67 billion US dollars (2024).

Unfortunately, that's not the whole story.

Innovation and progress aren't one and the same thing. If the financial crisis taught us anything, it's that. CDOs and the algorithms developed to design, package and trade them were masterfully inventive but to the service of what? The wanton pursuit of a quick buck led the market into a quagmire so toxic that we're yet to fully extricate ourselves.

Fintech emerged from the ashes of the credit crunch to redress the balance lost between institution and individual, to prioritise the needs of the non-owner we.

Echoing the notion that AI should be used to augment human activity rather than replace it, Sylvain Rochan of the Canadian Institute of Mass Communications suggests (in a recent piece for Medium) that our relationship with it is re-characterised as a partnership.

"We interact with them, work with them, play with them. They don't care if we are empathetic towards them. Caring for AI is not meant to make them feel good or reduce the chances of them going off the rails. It is for us. We want to feel comfortable around them and we will want these most sophisticated artificial beings to imitate good behaviour as they learn about the world. These AI can help us become better humans."

It's no longer enough to say that gains made through technical innovation will "trickle down" to consumers. Remember, it's the consumers' data that will sustain this new breed of artificially intelligent financier and it's also their jobs which could be threatened. The success or failure of AI in finance will therefore be measured by the service it performs to the whole value-chain, not simply the owner *we*.

As Justin Lyon of Simudyne puts it, if we fail to utilise AI properly, "we'll lose many, many opportunities as a species."

Arthur C. Clarke's *2001: A Space Odyssey* closes with the celestial Star Child - a Nietzschean Übermensch of sorts - surveying the world below and pondering what to do with its immense power.

The hopeful, if somewhat tentative, confidence of its reflections could just as easily be applied to the application of AI;

"Then he [the Star Child] waited, marshaling his thoughts and brooding over his still untested powers. For though he was master of the world, he was not quite sure what to do next. But he would think of something."

However, if we are to be superhumanised by artificial intelligence, then the interests of the owner we and the non-owner *we* will need to be fully reconciled. And for this, we're going to need a little more than wishful thinking...

◆**TFT**

> **Along with the aforementioned improvements to services and security, the other major boon of "employing" the unpaid undead is cost efficiency.**

How to solve a problem like bias?

The question at the heart of AI ethics

At a time when diversity and inclusion are top of the agenda for many companies, some firms are worried that the use of AI could actually scupper this ambition. In reality, however, the real culprit in this scenario tends to be human failings, which can often lead to bias in the AI systems we create.

RHYS POWELL,
Managing Director UK
EBO.ai.

EBO is a fast-growing chatbot company that brings the positive effects of automation, data analytics and simplicity-of-use to customers.

If humans are inherently imperfect and biased, how can the systems we build be any different? Given that AI systems are designed by humans, it is unsurprising that we inject our biases into them, even when it is unintended. But how can this be rectified?

As most AI systems are based on machine learning, we need to start by looking at the how we're collecting and selecting the training data we are using. Training data is not only the 'textbook' that teaches a company's AI to do its task, it is also used to continuously improve its success rate and the accuracy of its predictions.

If the training data is not inclusive and balanced enough, the systems we create could engrain this bias as well, which could lead to certain sections of the population we work with – or look after – being unfairly discriminated against.

It's easy to see how this could manifest itself in the financial services sector. Imagine if AI was being used in the bank account opening verification process. Depending on the training data that was used to 'teach' the system, it's possible that an engrained bias against certain customers could result in them being continually denied services or in flawed interactions between a customer and the virtual assistant tasked with dealing with their case. This is directly contrary to the goal of greater financial inclusion for everyone in society.

Selecting the right training data is therefore essential to the development of the machine learning model. The best examples of good training data are those which use bespoke information that is relevant to the task at hand. Without access to high-quality, relevant data, AI systems will learn only to do their job haphazardly at best, making detailed insight and analysis from AI/customer interactions absolutely vital.

AI can, however, become biased over time, even if it wasn't built that way initially. The external information a machine interacts with can have a significant impact on how it learns, and as AI doesn't question things in the same way as humans, that information can be accepted readily, even if it is detrimental to fighting bias. We can test machines to see if they carry bias, if they have inherited it through data training, and whether there is potential to rectify it, helping companies who deploy AI retain an important measure of control and ability to steer their machines in the right direction.

Using AI to encourage inclusivity

The good news is that AI can also play a significant role in creating unbiased structures. It can, for example, influence recruitment decisions by making relevant information available at decision points throughout the hiring process. This helps people to rely less on 'gut' feeling and more on the job-related information.

AI systems can even recommend what text to include in job postings in order to attract the most diverse applicant pool. By tapping into the latest market data, these systems can suggest the correct salary range for a particular role, to avoid any disparities between employees of different genders or ethnic backgrounds.

When used in this way, AI actually has the potential to remove bias and support processes that enable a more diverse and inclusive workforce in any industry. As financial services is usually perceived to be a male-dominated, middle class environment, this could open up job roles to a broader talent pool. As such, firms will be able to combat this stereotype and instead focus on finding the best person for the job.

One size doesn't fit all

There is a common misconception that AI is only for the larger players in any market, but this simply isn't the case. AI can transform customer interactions, among other things, regardless of a company's size.

Historically, SMEs have been less enthusiastic about new technologies, but already that is changing.

A growing number of smaller enterprises are seeing the value of using AI to process huge amounts of data – and to do so much faster than people. Using the technology this way can dramatically reduce the time that staff spend on tasks that distract them from more valuable or pressing matters, such as customer service.

Customer service is a key priority for the financial services sector, with most customers now used to receiving service 24/7. AI can help here too in the form of intelligent bots and virtual assistants, which can be highly personalised and taught to avoid any bias.

As a result, customers that might otherwise get frustrated waiting to get through to a call centre, or waiting for a response to an email, can instead experience quick, effective, even enjoyable conversations with the business they're trying to contact. These virtual assistants can answer routine questions quickly or transfer the customer to an interaction with the most appropriate human member of staff if necessary.

Bots also provide the business with a complete, accurate, easily-accessed record of each customer interaction, including details of how the customer felt at the end of the conversation, which can be used to identify and remove any bias within the system very quickly. All of this data is captured immediately and automatically, which not only helps to build a deeper understanding of each customer's experience, but also enables firms to improve their service.

Going a step further

Bias isn't the only ethical conundrum that must be solved. Data security and privacy are valid concerns held by many when thinking about bot and virtual assistant interactions too. How can people be sure that any information they share with an AI assistant will be safe, and used in the correct way?

More importantly, the right to be forgotten is a vital consideration which must be appreciated when AI systems are being designed, as the capacity for persistent memory has implications for any data that customers share. When used improperly, such data could be the foundation of bias, and could lead to intrusive practices carried out by virtual assistants who don't know any better.

If we are to solve the issue of biased AI, we must ensure that the customer is central to any solution, and that businesses who deploy AI do so in an ethical manner with respect for the rights of those interacting with their service.

AI: Advantageous to all?

AI is a technology that is both transformative and disruptive. As such, it has already had an enormously positive impact globally, both commercially and within society.

Its evolution over the last several years has been facilitated by the availability of enormous amounts of data, major technological advances in computational power and storage capacity, as well as significant scientific and engineering innovation related to AI methods and tools.

As these systems develop and improve, they are sure to continue to impact society in other ways. Because of this, it is important that there is a belief in, and a commitment to, trust in its processes and its ethical principles. Only then will businesses be able to fully and confidently reap the benefits that AI can offer. ◆TFT

> **"The good news is that AI can also play a significant role in creating unbiased structures."**

Banks are becoming easy prey for Fintechs

People are exhausted by banks being slow in areas like settlement time, access to services and ultimately – adoption of change. Fintechs are attacking these vulnerabilities and customers are seeing value in the emerging products and services. What will it take for banks to survive?

MATTHIAS WEISSL, *CEO of Verum Capital and External Lecturer at the University of St. Gallen MBA*

Automation is the way forward for banks

Automation has benefits for both businesses and customers. For businesses, it reduces headcount-related costs without substituting an equal increase in software-related costs, while shortening time-consuming processes and minimising human error. For customers, it creates faster, simpler and often less expensive user experiences.

Increased regulatory scrutiny, legacy infrastructure and multi-year migration projects are just a few of the challenges that make banks slow to pursue automation. For example, in Switzerland, Credit Suisse is planning to migrate to new IT infrastructure in 4-7 years from now. This kind of timeline may present a challenge to remain competitive, as data volumes grow ever larger. Internet data is almost doubling every year and is projected to exceed 400 exabytes per month by 2022. By that time, 44% of data will come from smartphones, compared to just 18% in 2017. Growth in mobile use will happen mainly due to technologies like 5G, which will increase the average internet speed on mobile devices from 8.7 Mbps to 28.5 Mbps, and improve the accuracy of tracking through reduced latency. The volume of data that will be generated, and the ease of use that mobile users will have become accustomed to, make the introduction of automated processes an imperative.

In recent years, banks have been unable to benefit from automation as much as fintech companies have. The largest Swiss bank, UBS, needed 210 employees for every $100m (USD) earned in 2017. By comparison, China-based fintech Ant Financial needed 100 employees for every $100m earned in 2017, less than half the headcount. Opening an account with a traditional bank can take hours, even days or weeks. It takes a few minutes to open a bank account with Revolut or N26. Transactions at banks are also multi-day events and often ask users to confirm payment by generating a code through a hardware token, such as an external USB stick or card reader that you need to keep on hand. Transfers with Revolut or N26 can happen instantly and approval of all transactions happens entirely in the app.

MATTHIAS WEISSL
CEO
Verum Capital

At Verum Capital, a Switzerland-based blockchain firm I co-founded, we advise banks on how blockchain technology can be applied to improve services. In our experience, banks lack technical employees who understand, at an operational level, how to implement blockchain initiatives. Executives at banks increasingly hear that blockchain can help them reduce transaction fees, decrease settlement times or create liquidity for traditionally illiquid assets such as real estate. They often possess the strategic vision to integrate blockchain technology, but not the technical know-how. It is not simply a matter of firing and hiring. Globally, very few people understand what it actually takes to implement blockchain solutions. It is an emerging technology and competition for expert practitioners is fierce, especially in terms of company culture alignment.

At Verum Capital we have frequent requests from banks for educational workshops. From what we see, once the small banks gain more knowledge about blockchain, and if they can create a culture that attracts technical talent, they will likely be the first banks to implement automation through blockchain solutions. This is because in terms of their past software decisions, small banks have less technical debt than large banks. Small banks already express high interest levels to us regarding the tokenisation of physical assets and funds in order to increase their liquidity. This use case will become mainstream once regulated digital exchanges, like the forthcoming SIX Digital Exchange in Switzerland, allow the trading of tokenised assets.

Enter the challengers

Fintech companies are typically less funded than big banks. They need to do more with less. Which is why automation is often at the core of their offering. This puts fintechs in an advantageous position to navigate the data-rich future. However, fintechs cannot beat banks everywhere. Nor do they want to. Recent trends show that for fintechs it is a better strategy to occupy a niche. If fintech companies try to do too much, they risk spreading resources too thin and delivering an average customer experience rather than an exceptional one. Fintechs risk becoming more like the big slow banks they're trying to challenge. The way they challenge banks is through specialisation and collaboration.

Let us return to Revolut and N26 to illustrate this point. Their respective core products are payment cards with low foreign exchange fees and fast transaction settlement times. This is a highly focused specialisation. To deliver this value they have partnered with several other companies. Collectively, the partners create the ecosystem necessary for Revolut and N26 to offer their core products. For example, Revolut uses ClauseMatch to deal with anti-money laundering processes, Onfido for remote customer identification, and White Horse for client insurance. A similar mix of companies enables N26 to focus in-house resources on its payment cards. This ecosystem of startups specialising and collaborating in the financial industry would not have been possible a few years ago due to regulatory restrictions. Recent regulatory changes have made it much easier for fintechs to emerge and the changes are happening globally.

A typical European case is that of Lithuania. Lithuania streamlined its application process for an electronic money license, enabling companies to secure one in three months. This is much faster than in other countries. Lithuanian e-money licenses allow companies to apply for passporting rights to offer services across the EU. Application volumes have risen sharply. In Hong Kong, new entrants to the financial market can now apply for a virtual bank license. With a virtual bank license, one niche that is expected to generate a healthy return on equity is the provision of small unsecured loans to retail customers via credit cards.

Big tech companies are also thinking about ways they can add value in the financial services industry, and they see value in collaborations too. Take the recent launch of the Apple card. Apple provides the interface solution to customers, while Goldman Sachs provides banking infrastructure and required licenses as the issuing bank.

Banks have a complicated relationship with technology

Goldman Sachs is very visible in its collaboration with Apple, in part because it has never before issued a credit card and has essentially no history with consumer banking. In other collaborations, banks are more in the background, in some cases providing services anonymously to customer-facing fintech companies. Take US-based fintech LendingClub for example. To facilitate peer-to-peer lending they require an issuing bank, and therefore established working relationships with WebBank, NBT Bank and Comenity Capital Bank. LendingClub owns the technology and runs the marketplace and the banks effectively rent out their regulatory status for a fee.

The relationship between banks and financial technology companies goes even deeper though. While banks discretely enable customer-facing fintechs to operate, other technology companies sit even further in the background, providing critical products that enable banks to run. This is especially the case at smaller banks. Companies like Fiserv, FIS and Jack Henry & Associates Inc. are little known outside the banking world. Nevertheless, their technologies make up much of the modern banking system. From software for debt collection to core system design, they provide a huge range of products that enable banks to run. Executives from small banks say they feel as if they are becoming franchises of these providers, because they are so reliant on their technology.

All roads lead back to education

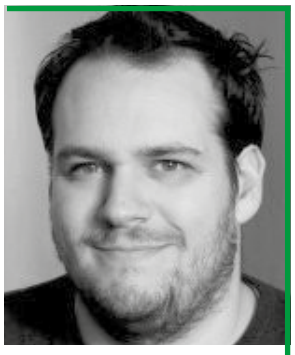
In general, business students learn to conceptualise about technology, and leave technical execution to people with computer science, data science and cryptography educations. There is a growing need in the financial services industry for people who can think strategically and then implement technology themselves. In parallel, there is a growing need for banks to develop environments where technology workers can thrive, in terms of both the IT infrastructure and the prevailing employee culture. Changes in business education can help by graduating more tech-savvy finance professionals into the workforce.

In Switzerland, the University of St.Gallen MBA launched an elective this year called 'Fintech: Trends and Use Cases', which we at Verum Capital teach. Additionally, the MBA programme launched a fintech case competition this year in collaboration with SIX and digitalswitzerland on how to scale regulated digital exchanges internationally. Further, the Berlin School of Sustainable Futures, University of Applied Sciences (BSSF) uses blockchain technology for course administration, curriculum selection and fractional ownership by students. They are also part of our network at Verum Capital. The University of St. Gallen MBA and BSSF examples show that fintech has begun to converge with mainstream business education in the best interest of the industry.

The banks that thrive in the future will be those that learn how to collaborate with fintechs and augment their company cultures to become technology leaders themselves. If they don't, members of the increasingly tech-savvy financial services workforce will desire to work elsewhere or increase competition by starting their own companies. ◆**TFT**

Rising fraud forces insurance firms to sharpen their own services

There's no other way to put it: insurance companies aren't doing enough to fight fraud. A fraud pandemic has spread across transactional industries, but a conspicuously high portion of this rise is attributed to the insurance industry: a huge 27% increase in fraudulent insurance claims between 2017 and 2018.. **JAMES LOFT** *Reports*



JAMES LOFT,
Chief Operations Officer
Rainbird

How to make sense of this recent spike? We've heard in the news that police are failing fraud victims. The crime demographics, meanwhile, have led some to direct their anger towards thirty-somethings and millennials as the main fraud perpetrators. But amid all the finger pointing, what's been less talked about is how businesses are arguably failing us even more.

Premiums are soaring; services are not

According to the Association of British Insurers (ABI) and the Office for National Statistics (ONS), the cost inflation of car insurance is now eating up 10% of a young driver's average salary. As Cifas CEO Mike Halsey has said, the idea that insurance scams are 'victimless crimes' has always been a bogus one - they unite us all as victims of slower claims applications and rising premium costs.

Ultimately, there is more that insurance firms could be doing to keep these prices down. First Notification of Loss (FNOL) is where the problems begin: contact centres typically field these calls, where handler error is common in an environment in which employee turnover is high, roles are often low paid, and employee engagement can be poor. At square one in the claims cycle, a flawed fraud judgement has numerous knock-on effects: claim delays, increased costs, reputation damage for the insurer and dissatisfaction for the customer.

With resources stretched and employee turnover high, not every claims handler can be an expert in their given field - be that collision damage or work-related injury. But what they can be is properly armed with all the relevant, real-time information they need to cope with a constant stream of potentially fraudulent claims.

Fraud is shape-shifting; fraud departments should follow suit

Businesses would be wise to adopt a dynamic approach to what is an open-ended problem. Whether due to specific regional or market trends or persistent areas of vulnerability, it's important to remember that every insurance company's fraud profile is unique; there isn't a one-size-fits-all solution. A tailored approach to fraud prevention is key: this means investing in decision-making platforms that are configurable, scalable, and based on the logic of firms' best gatekeepers of fraudulent claims.

It's this interpretable, easy-to-use approach that can allow firms to modify their own automated decision-making systems as their business grows and challenges change. With fraudsters becoming increasingly creative, fraud departments need to remain adaptable to react to constantly shifting goalposts.

For example, PI reforms are likely to diminish the type of fraud that we often see in the motor PI market today. What the fraudsters will do next, however, is harder to foresee - so firms that are able to pivot the rules or logic powering their technology will be much better placed to tackle new forms of attack.

Data alone won't do

With a target as morphing and malleable as insurance fraud, historic data can't be relied on to spot whatever's coming. After all, few economists or criminologists would have predicted last year's surge in fraud statistics based on the previous year's data.

Couple this with the fact that the insurance industry is one blighted by poor quality data. You wouldn't build your house on sand, so why build your fraud prevention tactics on bad data?

Data has traditionally been the lifeblood of the insurance industry, and sure enough, most insurers' idea of deploying AI means training it on masses of statistics. But any reliance on monumental amounts of digits introduces a new risk that Accenture calls "data veracity".

80% of the insurance executives surveyed for Accenture's Tech Vision 2018 reported that their organizations increasingly use data to drive automated decision-making at scale - yet a recent study estimated that 97% of business decisions are made using data that the company's own managers consider to be of unacceptable quality.

Keep humans at the centre of decision-making

Beside creating operational risk, an over-reliance on data also risks devaluing the power of human expertise. Human-centric AI, based on the logic of people rather than the amalgamation of numbers, makes the most of expertise, and overcomes the challenges associated with building models based on insurance data. McKinsey & Co believe that by 2030, AI will inform every major decision an insurance company makes - but stressed the continued integral role of underwriting and claims experience. "There's no substitute for good old-fashioned claims and underwriting experience," senior partner Ari Libarikian said, "and that will very much still be part of the organisation."

The nous and expertise of seasoned decision-makers in detecting and examining insurance fraud will arguably be at a premium in years to come - particularly with waves of baby-boomers exiting the industry and less traditional workforce demographics replacing them. Workforces are becoming more transient, more fluid; the odds of employees moving on for a different experience rather than gathering years of experience at your firm are rising all the time. Firms should be acting now to not only nurture and preserve their most valuable people, but also scale and maximise that expertise that they possess. You hear a lot about knowledge leakage - but insurance firms will soon become very leaky indeed without sufficient planning.

Rebuild consumer trust with quality and convenience

Trust has been an issue in recent years for the insurance industry. Shady brokers or dodgy practises, such as slyly jacked-up premiums, have damaged the relationship between insurers and consumers and dented reputation at a PR level.

Some would argue that this severed relationship has laid the groundwork for the recent upturn in fraudulent foul play. The best way to rebuild trust? Transparency. If claims handlers can keep their customers more thoroughly informed about claims decisions, with more detailed accounts of the rationale that was applied, customers can rest easier - even if the decision is an unwelcome one. To achieve this while maintaining an efficient claims process, human-centric and transparent automation is really the only option firms can take.

Equally, if not more important, is the role of quality human interaction. EY describe claims interactions as "moments of truth" in customer relationships - the strength of these critical interactions dictates the loyalty of customers in the long run. A claims department armed with AI-powered decision-makers - who have time and relevant information to offer their customers - can create these long-lasting relationships.

Of course, to really satisfy customers, all of this needs to be built on a foundation of efficiency. It's not just fraud or pricing inflation that's come into focus in recent months. The insurance industry is coming to terms with the fact that it needs to follow the same march of progress as all other customer-facing sectors: a race towards convenience.

Speed is a large part of this equation. According to Genpact, an AI-enabled claims department means claims adjusters can spend 95% of their time optimising indemnity and customer service, while Deloitte finds that prospects are 20% more likely to purchase a life policy as the underwriting and application process gets closer to real time - which can only be facilitated by accurate, frictionless fraud decisioning.

Meet IFSR 17 with full transparency

As well as building trust, transparent technology is also a way to internally cope with upcoming legislative challenges. Insurers utilising new technology could face a struggle to remain fully compliant, particularly with the International Financial Reporting Standard 17 (IFRS 17) on the horizon. If their technology is designed with the audit process in mind, providing full rationale for automated decisions regarding insurance contracts, then the IFRS 17 demands of reporting transparency can be met with much less efficiency or profit loss.

The legislation will require firms to grasp the front-end and back-end business rules that are applied to process contracts, and the acute risks involved. Automation technology with in-built, detailed audit trails will therefore be a crucial asset.

Insurtech coming of age?

Thankfully, the fraud arms of insurance companies look to be maturing: tech budgets are generally on the rise, with 41% expanding their tech budgets for 2019, and two-thirds expecting to acquire claims fraud detection technologies. Only 2% of tech budgets contracted for this year.

If they get their fraud decisioning right, and are able to explain their rationale while improving their accuracy and efficiency, firms will see the positive overspill in the customer journey - and hopefully a subsiding of the current fraud spike. It all depends on whether this traditionally (and by definition) risk-averse sector is able to marry its efficiency gains with the transparency, consistency and adaptability of scaled human expertise. ◆**TFT**

Look back to move forward:

TRIBAL BANKING IN THE DIGITAL AGE

A renaissance in banking is occurring before our very eyes. Technological advances that delight us have intersected with an increased consumer demand for transparency and fairness leading to the massive unbundling of products and services in financial services and insurance.

A new generation of bankers and technologists are questioning every string of code and product that make up incumbent banks across the globe. As the pendulum swings from analog to digital, the unbundling of the incumbents is begging the question: "now what?" -- or worse, "so what?"

The current crop of neo and challenger banks such as Revolut, Monzo, N26, Monese, and Twisto are providing elements of the traditional bank account to a digital-native crowd that prefers the branchless experience and simple sign up. Money is moved from point A to point B.

Job done! Eh, not so fast.

Digital natives are no different from our parents except that we want everything faster, cheaper, and catered to us. We're still getting married, having children, buying homes, and of course investing for our futures.

We're looking for brands that will embrace us, understand us, predict where we may make mistakes, teach us something, reward us, help us change our lives and our world.

My airline app knows that I require a gluten-free meal and prefer an aisle seat. My music app designs playlists based on where I am (and I love it!). Why can't my bank understand that my vocation means that I travel constantly? Shouldn't my bank know that I'd much rather donate my points than waste them on junk I don't need?

These questions keep innovators, entrepreneurs and investors up at night. In order to deliver on the promises made to investors and consumers alike our industry must delve deeper into consumer satisfaction, loyalty, and deconstruct their financial lives in order to deliver the level of service that the digital age is showing us is possible.

Digital first offerings are solving for easy account opening, relatable customer service, and a decent level of personal finance management. There remains incredible opportunity in purposefully rebundling a deeper set of services and advanced consumer offerings that we will need as our lives become more complex.

To purposefully rebundle financial and insurance products we must deepen our understanding of the customers we aim to serve -- their pain points, and the points that delight at a deeper level. Traditional customer segmentation does not go deep enough and, only recently -- with great thanks to the digital revolution -- have we started to recognise the tribes that make up our human family.

As in the case of the Renaissance that gave us innovations in art and literature, we must look to the past to continue to accelerate the banking renaissance we find ourselves in.

Before we lived in huge cities, enormous dots connecting our ever internet-powered world, we lived in small communities -- our tribes. Way back in our cave-dwelling days we formed these tribes based on need -- a need to outwit nature, a need to protect our beliefs, and our inherent need to connect. While we no longer live in tribes as our ancestors did, today we are brought together by common interests, our battles, and our joys.

Our urban centres are melting pots of tribes united by our sports teams, our employers, our passions, and our vocations. Vegans, carnivores, chefs, gig-workers, travellers, entrepreneurs represent some of the tribes that make up our human family. In order to create financial service and insurance platforms to cater and delight our tribes we, as an industry must:

- Accept that tribalism is a natural human behaviour that represents deep value for our industry.
- Deconstruct the financial needs of our tribes.
- Purposefully rebundle products and services that truly evolve with each tribe's journey.
- Streamline technology in order to efficiently deliver and evolve on the back end while providing cutting edge front end experiences.
- Stay nimble, aware, and obsessed with consumer satisfaction.

"In the US and Europe there remain small credit unions and community banks that offer more favourable loans to their clients than 'main street' banks. These community banks cater to specific types of people united by region or vocation," says Matej Ftacnik of Vacuumlabs, which is involved with the technology development of several global banks. "These smaller, nimbler banks are able to build an arsenal of services and offerings that meet their customers' specific needs -- a reality that incumbent banks and their younger digital siblings cannot meet due to their design."

Fuelled by open banking initiatives and substantial improvement in obtaining virtual banking licences, technology pioneers are hedging their bets in this direction. Germany's Solarisbank and the UK's Starling are making it easier to launch customised financial services platforms creating prime examples of the bank as a service.

At the forefront of building the technology required to quickly launch and scale tribal banks is the design and development studio Vacuumlabs. The Slovak based firm has worked with incumbents like Erste and Raiffeissen Group, game changers like Railsbank, and challengers like Twisto. Currently, they are hard at work creating new virtual banks in Asia. The goal remains the same: find the right balance of a beautiful user experience and depth of service to deliver on clearly defined customer tribes and their financial lives.

"We are about to launch with American and European players that are excited about our ability to design, build, and launch tribal banks at a fraction of the cost and time it once took," says Marcel Klimo, the key designer and architect behind a new Vacuumlabs spinoff called TribeFS. "Our mission is to forge financial services and insurance solutions for tribes all around the world."

Facebook's Mark Zuckerberg recently announced to the world that the future is private. What is more private than my money and my financial well-being? With whom am I willing to share the intimate details of this crucial part of my life?

You guessed it. My Tribe. What's your Tribe?

◆**TFT**

To figure out how TribeFS can help serve your Tribe, reach out to the team at TribeFS.com. They're scheduling tribal strategy sessions throughout the year, so schedule a call or visit one of their offices in Europe, Asia, or the Americas. To learn more about their parent company visit Vacuumlabs.com.

Talk with the team directly on Twitter @MarcelKlimo @MichaelCallas and @Ftacnik or find them on the Money 20/20 App

Luxembourg – a Place for the Future

Profile

Nasir Zubairi

OCCUPATION

CEO, The LHoFT Foundation

BIRTHPLACE

London, UK

BOOKS

"How to Win Friends and Influence People" by Dale Carnegie.

FILMS

American History X

RESTAURANTS

Ali Baba, 46th and 2nd, Manhattan, NY

HOBBIES

Cricket

BUSINESS PHILOSOPHY

Live and Learn

KATIA LANG
TFT CEO

Innovation doesn't only happen in London. We've checked. TFT had a catch up with **NASIR ZUBAIRI**, *the CEO of the LHoFT - Luxembourg House of Financial Technology, on fintech innovation, how a country can be a startup, and how banks are doomed... Or almost. Read on.*

TFT: So, how was LHoFT formed, and what is the idea behind it?

Nasir: It was officially incorporated as a foundation in April 2017. It was essentially driven by the Minister of Finance, Pierre Gramegna, who was putting together Luxembourg's strategy around fintech. It's partly government funded, partly by the private sector. It's a not-for-profit public/private foundation.

TFT: What's its business purpose? Does it serve the interests of businesses in Luxembourg, or is it just a government initiative to attract more fintechs?

Nasir: Well, attracting fintechs is, I guess, an intangible output. But ultimately, the core mission of the LHoFT is to ensure the competitiveness of Luxembourg's financial services with the key focus on technology. One initiative is around ecosystem development: bringing together various participants within the fintech ecosystem of Luxembourg and connecting them. The other strategic focus is on the marriage between traditional finance and the fintech sector. We're looking after traditional institutions, helping them in their digitalisation. When we go around the world, we find fintech firms that look interesting and could solve current problems financial companies we know are facing. We then help them connect and move towards collaboration. So, to answer your question, we don't try and drag people to Luxembourg, that's not our job. Our job is really to find solutions and help finance to move forward.

TFT: What do you consider the greatest achievements of LHoFT so far?

Nasir: Putting Luxembourg on the map. We moved into our current space and filled it up very quickly, seeing a huge increase in demand from firms wanting to come to Luxembourg or more importantly, work with Luxembourg. I think the interest that we receive from increasingly larger and more prominent fintech firms signifies that we have succeeded. By the way, in recent months Alipay chose Luxembourg as their EU headquarters. That's a great achievement for us.

TFT: What is it about Luxembourg that is so attractive?

Nasir: We have 7 of the world's 52 Tier 4 data centers in Europe here now. We have, I believe, the fastest internet in Europe already, and they are currently installing more fibre networks. Data and connectivity are big elements of making sure that we have the core infrastructure to be digitalised.

Sustainability is also a core theme in our financial services sector. The stock exchange in Luxembourg is the biggest green exchange in the world, it has the majority of the world's green bonds to finance sustainable initiatives.

Luxembourg's space engine is moving ahead fast. A lot of firms are coming up in that space, and in satellites we are already a European leader anyway. 6% of our GDP now comes from space and it is growing very, very fast. We see this as a big industry and a big part of the future. Another specific element of it is space mining - mining for minerals in space. We had the US Commerce Secretary, Wilbert Roche, here over the weekend signing an agreement with the Deputy Prime Minister.

TFT: It's all very futuristic when it comes to Luxembourg, isn't it?

Nasir: As I said we're small, so like startup we have agility. Things can move here quite quickly.

TFT: What's in your opinion will be the impact of AI technology of Finance?

Nasir: Within 1-2 years, nothing will change. It's still early days. In 5 years, I think we will begin to see quite a lot of robot process automation and first level AI. A removal of human interactions and efficiency of processes, potentially. I think there's acute pain from regulation and compliance for traditional institutions. AI can help solve that pain. The thing is, banks don't move that quickly, they typically have a procurement process of 2,5 or 3 years. That means that they'd have to be looking at these things now to have them out and making an impact in 3 years.

TFT: So, what's the future for banks?

Nasir: The economy in Europe is faltering, banks are starting to shed jobs which is often an indicator that we are about to go into recession. That's a big red flag, they need to save money, most of them have a return on equity between 4-8% which is absolutely diabolical. Cost management is their focus, so if AI and machine learning is implemented, it would be around automation and better management in compliance. The banks in Europe are in trouble. Negative interest rates are killing them, inefficiency and the increasing cost of compliance are killing them, they're not able to keep up with it all. It's not all their own fault, current EU regulatory and monetary policy could seriously damage banking in Europe.

TFT: How can it be improved?

Nasir: No matter how much experts scream, banks just don't suddenly start to do things very differently. The way we look at it, is how can we deploy some speed boats near the oil tanker to help it move faster. Things like helping them be more agile with their procurement processes so that they can integrate new technologies faster. Also, education around project management methodologies and innovation process... and hiring the right talent: quite often banks are taking somebody internally, who has been a banker all their lives, as the head of innovation. What the hell does that person know about innovation? Of course, it doesn't work!

TFT: Anything exciting you'd like to announce?

Nasir: The Global Venture Summit, which will take place in November this year, will be quite a unique event. There are a lot of "same old, same old" events all over Europe. This one's different because the point of the summit is bringing a large number of very prominent US-based VCs over to Europe with the aim to invest. In fact, they will look to create a syndicated fund prior to the event. There are going to be about 60 to 70 notable VCs, around 30 billion in AUM, and some outstanding speakers. They want to meet with their European peers and get to know them, but also, critically, meet the best and the brightest of European startups. It will be quite a large event and I'm looking forward to having the European community coming to Luxembourg as well.

TFT: What's your personal story? How did you end up working for LHoFT and running it?

Nasir: Part of the reason I moved here was because I saw a tremendous opportunity in fintech. But the core reason for me is that we have people from all over the world running banks and financial institutions in Luxembourg. No matter where they came from, somewhere in the conversation they would say, "Let's do something great for Luxembourg." I saw that loyalty and belief that they could contribute to changing and developing a country as an incredibly powerful tool for change. There's a sense of belief in Luxembourg, given that it's a small place, that you can change a country. And people, no matter where they've come from, including myself, work to that objective. If you think about it from a personal legacy perspective, i.e. what you leave behind on this planet, to be remembered for having helped change or develop a country is pretty damn cool, right? ◆**TFT**

LHoFT Offices

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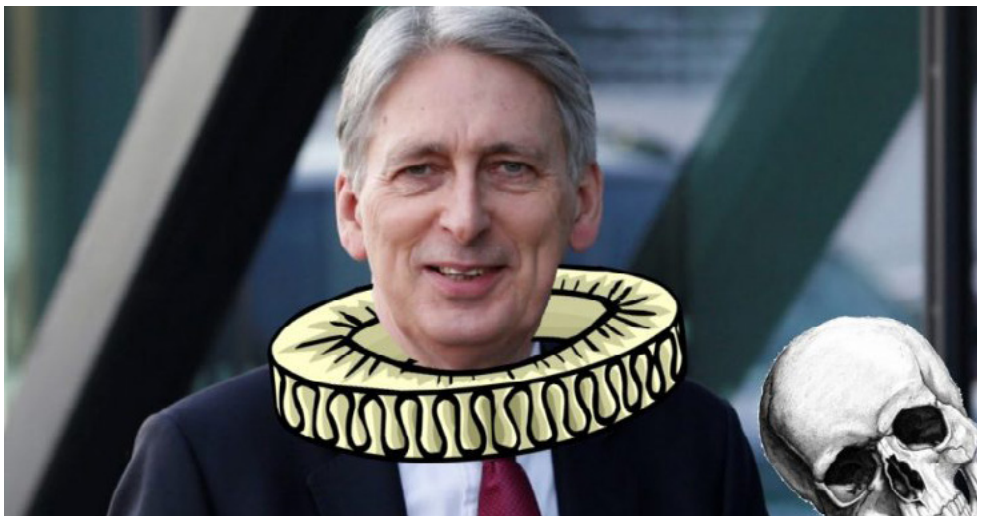
Something Spreadsheet This Way Comes:

Phillip Hammond Addresses the State of Fintech

MATTHEW DOVE
Senior Editor

In the cloakroom at the Guildhall, there's a statue of the Shakespearean actor Henry Irving. On April 30, in the Great Hall just above Henry's head, Phillip "The Spreadsheet" Hammond addressed the delegates of Innovate Finance regarding the state of fintech.



So, having strut and fret his (half an) hour upon the stage, were the Chancellor's words strong and stable or mere sound and fury, signifying nothing?

Like every master orator *(ed - citation needed)* Mr Hammond opened with a joke. In fact, just as *TFT* was preparing to tweet an amusing comparison between Phil's postponed appearance at the conference (he was booked to speak on Monday) and the delay in Brexit, he beat us to it!

"I want to apologise for my "no show" yesterday. It's perhaps fitting, as I was required in Brexit talks with the opposition, that I had to negotiate a short extension with Charlotte [Crosswell - event organiser] and her team."

From there, polite chortling subsiding, the theme of Hammond's speech became clear...

Henry Irving listening patiently below the Chancellor's feet

Missing the Call of History and the Avoidance Thereof

Citing that, "the competitive engine of the City of London - governed for centuries from this very hall – has always driven innovation and change" the Chancellor went on to emphasise the need for the UK to remain ahead of the curve.

He argued that the UK's dominance in finance is evident but it's not guaranteed. Keeping pace with developments in fintech is one of the ways Hammond believes the City will avoid stagnation in these increasingly fluid and uncertain times.

The Chancellor was therefore keen to highlight the bright side of fintech innovation in Britain;

"The UK is now a fintech powerhouse. Last year, fundraising for UK fintech reached a record £15 billion – representing one in every six pounds invested in fintech around the world.

The UK remains the top destination in Europe for venture capital investment, with almost double the funding of Germany, the next-largest destination. Only the US and China have invested more – and they both have a few more people than we do!

The sector in the UK now employs over 76,000 people in the UK; Is worth nearly £7bn to the UK economy; And provides financial services to nearly 50% of the population, compared to a global average of just 33%."

The Right Honourable Gentleman then tempered his jingoism by considering factors that could impede the rise of Fintech Britannia. However, before addressing internal barriers, Hammond chose to focus on the growing foreign threat. He is a Tory after all!

"International competition is growing. In Shanghai and San Francisco, gifted engineers and entrepreneurs are determined to preserve their city's rankings. In Mumbai, Tel Aviv, Berlin and Paris, talented innovators are building significant challengers. So the question for us is: how to maintain our advantage in fintech, in an increasingly competitive and globalised world?"

Brexit Stage Left

Acknowledging the elephant in the room and the silent scream on every delegate's lips, Hammond went on;

"Of course, I recognise that the immediate key to doing so is to ensure that we ratify the Brexit deal with the European Union – and do it soon! I know that, nearly three years on from the referendum, the ongoing uncertainty is bad for business and that every one of you in this room would have wanted us to have resolved this issue many months ago.

But democracy is a messy business – as Churchill noted, the worst form of government, except for every other form that has even been tried. And no one yet seems to have invented the perfect Brexit algorithm yet!"

Au Contraire, Mr Hammond! Having mined the wealth of expertise available at Innovate Finance, *TFT* is proud to announce that it has done just that;

(Brexit + Time Machine) + No Referendum = All Just a Bad Dream

For anyone lucky enough to have been stuck down a well for the past six months, the Chancellor offered a brief Brexit recap;

"The Withdrawal Agreement with the EU is finalised. Some changes may be negotiable to the Political Declaration about the future relationship but essentially it's time for Parliament to make up its mind.

We are reaching out across the House to try and build the majority we need. Which is the right way – indeed the only way – to proceed in a Parliamentary democracy. I'm confident of the good faith of both sides in those discussions and that we will, one way or another, reach a resolution, that will enable the deal to get through Parliament... so we can stop talking about Brexit...and get on with the business of business."

To Regulate or Not to Regulate, That is the Question...

For those delegates, quite understandably, thinking that Brexit has been used as a ministerial smokescreen to obfuscate a lack of regulatory clarity, Hammond said;

"Our Regulatory Sandbox led the way – and has been copied in dozens of other jurisdictions; Our Open Banking initiative is already dramatically changing the way consumers and small businesses engage with banking...we've set up a Regulators' Pioneer Fund to innovate in other areas of regulation...and the fintech strategy that I launched last year set out actions to make the UK the best place to start and grow a fintech business, including ensuring access to long-term capital for scale-ups. I'm pleased to say that one year on, all the actions in that strategy have now been implemented."

Unfortunately, this somewhat pat response will do little to allay the concerns of the speakers on the *To Regulate or Not to Regulate? A Global Take on Crypto & Digital Assets* panel, all of whom (including a representative of the FCA!) agreed that more regulation is needed and soon.

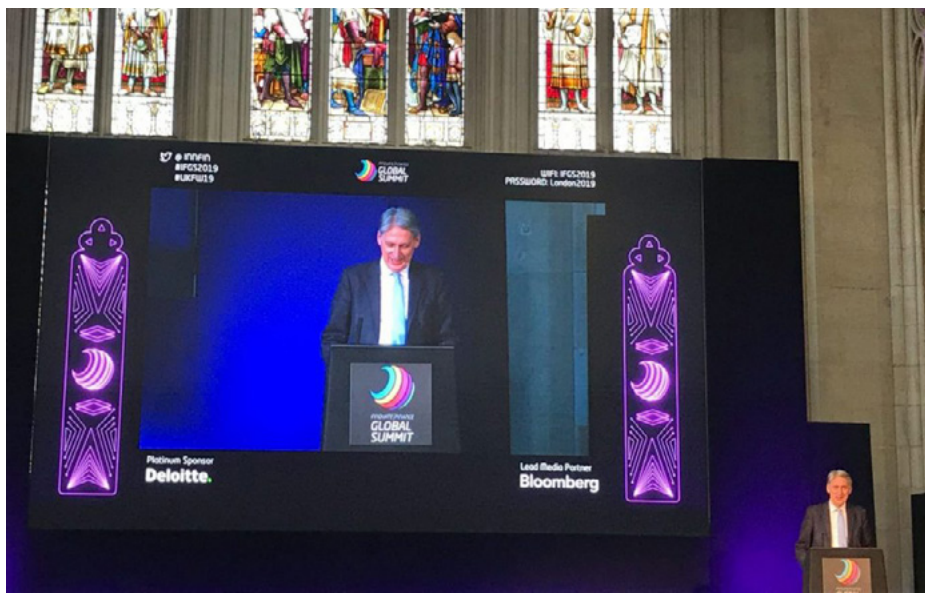
Ben Mason, Joint CEO of Compliancy Services, was especially strident in his belief that growth follows "regulatory certainty" and not the other way around. When he was asked for his final thoughts on regulation in fintech he opined, "Do it now!"

Hammond's approach appears to be rather more laissez faire, contenting himself to announce the launch of the Fintech Alliance - an easily accessible "digital marketplace" - rather than detailing specific policy. He also sang the praises of Innovate Finance's schools initiative.

"I'd like to commend the brilliant work of Innovate Finance in supporting our domestic talent pool...including the recently launched "FinTech for Schools" programme, and the fantastic new FinTech Jobs Board."

Pacts Britannia

Hammond next borrowed a line from his colleague Liam Fox claiming that, as well as posing an existential threat to the UK's market dominance, international economic



powerhouses can also be seen as an opportunity for post-Brexit partnership.

"We've already established fintech bridges with Hong Kong, Australia, Singapore, South Korea and China...committing governments and regulators to collaborate in supporting growth and investment in fintech across markets. And we're already seeing the benefits as fintech firms use the UK as a base to access markets around the world.

In February, we held the first UK-India fintech dialogue, and the Prime Minister has announced the first ever UK-Africa fintech partnership. That partnership includes a dedicated challenge fund to support Nigerian innovators turn their ideas into reality – and I'm delighted to welcome the six winners here to this conference."

Hack-neyed

The other picture of British superiority that the man with the little red briefcase wished to paint before his closing remarks was that of the UK as one of "the most cyber-secure jurisdictions in the world."

In an aside one part Keynesian market philosophy and one part Orwellian nightmare, he added that;

"We are determined to make a competitive advantage out of being one of the safest places to do digital business on the planet.

So we are leveraging the unique capabilities of the state and our world-class signals intelligence communities... through resources like the National Cyber Security Centre, harnessing the techniques of GCHQ to keep businesses safe in Britain's cyber space."

To paraphrase the Duke of Wellington, I don't know what statements like that do to cybercriminals but they frighten the Hell out of me!

So perturbing was this vision of state-lead cyber trade war that it was actually heartening to hear Raj Samani's response to the Chancellor's braggadocio. The Chief Scientist at McAfee pooh-poohed the idea that there even exists a Cyber Fortress Britannia let alone a commercial application for it.

Setting the percentage of GDP lost to cybercrime at around 1.6%, Samani noted that;

"Our failure to address these issues is impacting your growth and it's impacting your bottom line. And as we had the Chancellor up here earlier, it's deterring investment into this country. Quite frankly, globally, we aren't doing well enough."

Red Flags and Horseless Carriages

The question of the day was; what comes first growth or regulation? The chicken or the egg? The Chancellor is in the former camp, happy to wait and see, arguing that early interference by the FCA et al could stifle innovation. He referenced the advent of the automobile for a flourish of historical context;

"There's no point innovators pushing the cutting edge if regulators can't keep up – there's no point in us having the digital equivalent of requiring a man with a red flag to walk in front of a new-fangled horseless carriage."

The fintechs themselves, on the other hand (here voiced again by Ben Mason) are crying out for a little adult supervision, "just let us know what we need to do!"

To stretch Mr Hammond's analogy a little further than is perhaps strictly necessary, fintechs begging to be regulated is a little like putting the cart before the horse. But that's where we are apparently. Not that the Chancellor seems unduly bothered.

"I look around this ancient hall and see not the past, but the future: an industry that is buzzing with ideas, energy and optimism."

Optimistic for sure but for how long? As Mr Hammond took his leave, a quiet chorus of doubt was growing. The shuffling of chairs in the interval that followed (the room emptied in fairness) disguised the faintest echo of the great Henry Irving as Hamlet breathing new life into old words, "enterprises of great pith and moment, with this regard their currents turn awry and lose the name of action"

◆**TFT**

How Are Simplified Digital Solutions Improving The Banking Experience For Corporates?

OLIVER OLMESDAHL
CEO CoCoNet

In today's fast-moving world, the process of doing business seems to become more complicated with every day that passes. Processes, systems and business models are constantly evolving, while banks and their customers must learn to operate in an environment that is defined by continuous change and an increased focus on the value of data.

It is not possible to remove complexity from every business process that exists. Nevertheless, digital tools can at least simplify banking by offering banks' corporate customers greater efficiency, deeper insight into their financial information, and a higher degree of personalisation than they have ever had before. Today, companies can take advantage of digital banking platforms with enhanced dashboards that are powered by artificial intelligence, such as CoCoNet's platform MULTIVERSA FIP.

Smart, personalised dashboards enable users to gain quick and efficient access to important financial information, optimise their workflows and to benefit from intuitive user interfaces.

User-friendly security is also hugely important today. While customers want more secure systems, they don't want additional security to result in additional complexity. Rather than having to rely on cumbersome external security devices, such as smartcards or RSA tokens, to log in to their online banking platforms, they would like to use digital security tokens instead.

They want to be able to download these security tokens from their bank's online portal – something that is now possible with the latest technological solutions.

Digital technology is not only making life simpler for banks' customers; it is also making life simpler for banks themselves. New solutions are helping banks to improve their internal processes and support them through their digital transformations.

Banking might be a complex business, but the same does not have to be said for the user experience in digital banking. Next generation solutions offer the kind of functionality that people only dreamed of not long ago. What's more, they are bridging the gap between banks' increasingly complex operating environments and their customers, who want a simpler – but better –experience than they've had in the past.

Over the next few years, we can expect to see digital banking evolve even further to reflect new business models and ways of working, as well as the new opportunities presented by emerging technologies and broader data sets. ◆**TFT**

Of Course I Still Love You:

Ardour for Tokenisation Endures at US Capital Global Event

MATTHEW DOVE
Senior Editor

On April 11 at 6:30pm, SpaceX successfully launched the world's most powerful operational rocket. Following its maiden flight, the Falcon Heavy touched down safely on a drone ship named 'Of Course I Still Love You' in the Atlantic Ocean. Meanwhile, on the other side of the pond another innovation was getting ready for takeoff...

At Barclays Rise on April 16, "*The Power of Tokenisation - More Money for More People?*" saw five champions of digitised assets convene to wax lyrical about the current state of the nascent token economy.

Considering they're all on the same team, event sponsor Jeffrey Sweeney (US Capital Global), Nancy Fechnay (Bedrock X), Scott Davies (Torca), Simon Barnby (Archax) and Phil Mochan (Koine Finance) found plenty to bicker about! Good job then that TFT's own Katia Lang was on hand to moderate proceedings.

The crux of the debate centred not so much on whether tokenisation is the next big thing (each panellist having already supped merrily from the Kool-Aid) but rather when and in what form it will ascend.

The evening's discourse also brought strongly to mind words allegedly spoken by Marie Antoinnette, "There is nothing new except what is forgotten." The last Queen of France had quite the head on her shoulders until, well, she didn't and her words are as true today as they were in the 1780s.

Tuesday's event saw Madame Deficit's words breathed new life on the avuncular lips of US Capital Global's CEO Jeffrey Sweeney. The affable Californian bravely admitted to an audience of handpicked industry insiders that, "there are no new products here."

Such an assertion proves doubly accurate when one considers US Capital Global's first tokenised products, which include pre-IPO shares in Elon Musk's aforementioned celestial cab company. Space travel is nothing new (even dogs have done it!) and neither is leveraging the opportunity to break earth's surly bonds for commercial gain. It's not the products that are changing but the customers.

So, who exactly are the intended investors for such high risk securities?

According to Barnby, chief marketing officer at Archax, the ideal token investor is anyone and everyone, the economy token being nothing less than an exercise in "democratisation."

"Tokenisation allows a global audience to get access to global issuances that they don't currently get and so it nurtures liquidity in things where liquidity doesn't exist currently."

Bedrock X's Fechnay agreed but added a substantial *caveat emptor*;

"I'm of the stance that only highly-educated investors should be investing in early-stage high-risk assets."

Sweeney reiterated that only tokenisation can lower barriers sufficiently to allow retail customers entry to the juiciest new investments, SpaceX for example!

"We manage about 10 million Space X and we have fractionalised one of the OP units out of the BVI (British Virgin Islands) and that's available in Asia for about 200 bucks a shot as a derivative ... That's a tokenised offering, a marquee security. I assume some day you'll make money on that thing!"

He continued by saying;

"That's accessible to a low entry point investor but it's a marquee asset that, through tokenisation and using a derivative product, is accessible."

Given Torca's focus on regulatory services, it's no surprise that Scott Davies lent the occasion a healthy, albeit mild, dose of scepticism, asking Sweeney;

"Jeff, do you think an asset in something like SpaceX should be available to an investor?"

To which US Cap's CEO responded;

"Well, that's a suitability question. Suitability is primarily a function of what percentage of one's assets are allocated to a risky investment. Since the fractionalisation [of US Capital Global's SpaceX offering] is relatively small ... and since it will be a small part of anyone's portfolio, it'll be okay for a retail investor."

Like hard liquor then, SpaceX tokens may be fine in moderation, heavy diluted, but too stiff a drink may leave your head pounding and your pockets empty (the Musked Crusader himself has conceded that investors in the project may have to wait at least 15 years to see any tangible returns).

Such considerations, however, did little to dampen the panel's enthusiasm for all things tokenised. Huge growth is coming, we were told, opinion only diverged over when and where it's coming from.

Phil Mochan bore the standard of the major funds, as you'd expect from an "institutional-grade custodian."

He argued that tokenisation's real strength lies in the facilitation of "new distribution models for financial assets ... It opens up a wider range of asset classes which will lead to higher level of trading but most of that will be in traditional incumbent banks. It can be said that tokenisation is primarily about cost reduction post-trade and in risk management for portfolios."

Fechnay thinks the true value of digitising assets will manifest in venture capital, unsurprising given Bedrock X's remit of "disrupting the way that the future of innovation is funded."

"Within the VC community and the early stage investment community there hasn't been a lot of liquidity and it's getting further and further from the mark as we build bigger companies that don't exit."

Areas of early growth may remain up for debate but one point on which the panel seemed happy to concur was product design. Predictably enough, the quintet of financiers decided that they should handle initial token development and not the lawyers. As Sweeney triumphantly confirmed;

"Hire a banker first, not the attorney!"

Once again, the key here was the order in which processes occur rather than the processes themselves. Sweeney went on to explain his product-first-comply-later approach;

"If you give all the money to those guys first, you're not going to have enough for us to do the job correctly. What we'll do is build the product ... do the valuation, the term sheet and all that. Then we'll reach out to the attorneys and have them doc it up so you don't go to jail."

The mere mention of "the slammer" elicited a titter of nervous laughter from attendees and what Sweeney said next nearly brought the house down...

"The second thing attorneys can't give you that investment bankers do is the solicitation requirements, because what you say in the marketplace for your offering affects your jail-time!"

Zing! And the crowd goes wild....

As the spirited dialogue wound down, it was clear that these five horses may have different backers but are very much stablemates. They're were plenty of big opinions on show but only regarding the fine detail. It was left to the collection's most moderate voice, Davies, to wrap things up so everyone could hit the bar and swap business cards.

When Lang asked the man from Torca for his final thoughts, he breathed a deep sigh of resignation, one eye on the clock, and deadpanned;

"I agree with Jeff..." ◆**TFT**

Cryptoasset compliance in the UK: the story so far

STEVEN MARSHALL
Head of Compliance at Torca

The general perception of the cryptoasset space to date has been one of high risk and high reward. The rise and rise and then sharp fall in cryptocurrency prices last year combined with the furore surrounding Initial Coin Offerings saw a rush of early adopters into this application of blockchain technology, but investor losses were incredible and cases of fraud and near-fraud were abundant.

Ensuring that cryptoassets are uniformly defined and that those representing or equivalent to financial instruments are properly regulated, is therefore vital for the progression of the sector. Regulators in many jurisdictions recognise the high potential of Distributed Ledger Technology (DLT) and are actively tackling this challenge alongside market participants but, as with all disruptive technology, there is still some broad uncertainty and an inability to accurately predict all of the benefits and pitfalls.

So, as we forge a route to demonstrating compliance, we must first understand and categorise the types of assets in play. We already know what is required when dealing with traditional assets, so their digitised representations are typically dealt with in the same way; it is the issuance of new, natively digital assets and how they differ from those traditional assets that requires examination.

Classifying cryptoassets

The FCA's Guidance on Cryptoassets from January this year discusses the complexity of many tokens and the resulting issues when determining whether they represent a security, like shares or debt instruments. The Global Cryptoasset Regulatory Landscape study published by The Cambridge Centre of Alternative Finance (CCAF) in April takes this one step further, describing the lack of a common lexicon around cryptoassets as a key impediment to the development of new rules and policies. This is a problem that Global Digital Finance—an industry body that Torca is a member of—is actively trying to solve.

Cryptoassets in their broadest sense are 'tokens' produced using cryptographic techniques that can be stored, transferred or traded using Distributed Ledger Technology (DLT), such as a blockchain. Digital tokens have existed in non-monetary and quasi-monetary formats, such as with PayPal or rewards points for example, for much longer than DLT has been around. So, the real development here is the underlying technology and the efficiency it offers in a financial context. From a regulatory perspective, we first need to understand the nuances between the token types, their underlying benefits and their uses in order to establish whether they should be regulated or not.

The FCA categorise tokens into three types: exchange tokens, security tokens and utility tokens. Exchange tokens—more commonly known as cryptocurrencies— at present typically fall outside of the FCAs regulatory perimeter and are designed to be used for buying and selling goods and services. Security tokens represent or are equivalent to traditional financial assets, such as shares, bonds, a revenue share or fractional or full ownership of real estate assets, and therefore fall within the perimeter. Finally, utility tokens grant the holder access to a digital service—much like store credit—and in some cases, can meet the definition of e-Money and therefore fall within the perimeter.

This basic framework is an excellent starting point, but it is not all-encompassing. Some tokens may fall completely outside of these categories (and therefore outside of the FCA's perimeter) and some 'hybrid' tokens can fall under one of more of these categories. To add further complexity, natively digital tokens and tokenised securities can have inherently different characteristics, which would divide the classifications yet further.

As it stands, as with all markets, different jurisdictions have highly disparate approaches to legislation and regulation covering the DLT sector. In all actuality, legislative and regulatory alignment will never be achieved, so agreeing on a common lexicon as an industry will at least enable us to compare and contrast the treatment of cryptoassets on a like-for-like basis.

Comprehensive data on the market and its dynamics are not yet available, so a balanced approach from regulators is necessary to monitor activity and nurture confidence on a national and an EU level while further examination takes place.

Bespoke vs retrofitted regulation

According to the aforementioned study by the CCAF, countries with a higher level of domestic cryptoasset activity have typically retrofitted regulation. In a fast-moving new space that experienced numerous early cases of fraudulent activity, this response is justifiable. Some countries such has Malta and Luxembourg have been able to develop bespoke 'crypto-friendly' regulatory and tax regimes, however their ability to do so is intrinsically tied to their relative lack of cryptoasset activity.

An issue that may arise when retrofitting regulations, however, is the nature of DLT in comparison to traditional, centralised systems. In traditional systems, regulators are able to deal with individual 'nodes'—firms or individuals—on a case-by-case basis. Networks based on DLT, on the other hand, operate according to consensus and encryption may not be reliant on any one node.

This creates a conundrum for regulators: do the node operators—those who hold the actual ledger—have responsibility for the assets being traded, or does that lie with the private key holder that made the transaction? A majority group of actors in a distributed network could collude to create a consensus and undo a transaction or block a particular private key from transacting, thereby rendering their digital assets useless. This is a crucial point that has not been addressed in any real depth yet and, should responsibility lie at the doorstep of the node operators, it could require them to be regulated.

Particularly where cross-jurisdictional transactions are concerned, purpose-built rules may be required to counter this. As efforts to establish suitable regulations continue, self-regulated, industry-led bodies such as Global Digital Finance will be vital in setting such standards for the industry.

As a regulated firm based in London, Torca operates according to the rules put in place by our regulator, the Financial Conduct Authority (FCA). The FCA's approach to innovation is well documented. On 29th April 2019 Christopher Woolard, FCA Executive Director for Strategy and Competition, spoke at the 2019 Innovate Finance Global Summit on the impact of the FCA's work to promote innovation in the interests of consumers and their commitment to take this work further.

Torca believe that the regulatory sandbox is an excellent example of a collaborative and structured approach to innovation and innovative products. Across the four past cohorts, 89 firms have been able to test innovative products, services, business models and delivery mechanisms with real consumers under the watchful eye of the regulator. The fifth cohort, announced at the end of April, brought 29 more firms into the frame, eight of which are DLT-focussed businesses and one of which is Torca. Our core values include dealing with our regulators in an open and transparent way, so we are very pleased to be testing in the regulatory sandbox.

What's next?

Having issued draft guidance at the start of this year, a full policy statement from the UK's Cryptoassets Taskforce is due this summer and will provide some greater clarity and greater certainty on exactly where the FCA's regulatory perimeter lies.

And, of course, the ongoing Brexit negotiations may yet have a role to play. The UK is currently subject to over 40 EU Regulations and Directives on financial services and played a leading role in drafting the legislation it adheres to. The current interdependence between the EU and the UK means ongoing regulatory alignment would be highly and mutually beneficial for both parties and a complete break seems unlikely. However, in the event that a suitable agreement is not reached, there may be a period of flux while transitional arrangements are made.

The next three to five years will be pivotal for the advancement of cryptoassets globally and the route forward depends on the integrity, transparency and collaboration of all of its market participants.

◆**TFT**

Lessons in Staying Out of Jail for the New Breed of Tokenisers

At its security token seminar in London on April 23, Blockpass' CEO Adam Vaziri laid out his vision for upcoming blockchain innovation. The future of tokenisation isn't just about making money without falling foul of regulators. It's also about the establishment of self-sovereign identity... **MATTHEW DOVE,** *Senior Editor reports*

Following a keynote from DLT champ Lord Holmes of Richmond, Vaziri was keen to decentuate the negative and accentuate the positive of the ICO Boom 'n' Bust exclaiming that "now is the most exciting time" for the sector.

Despite its myriad vagaries, Vaziri argued that ICOs showed the world that startups were no longer beholden to institutional investment and VC funds. With a coin and prayer (and a decent marketing campaign) the new kids on the block were doing it for themselves. The only thing missing was compliance and that's where STOs and Blockpass come in.

ADAM VAZIRI,
CEO
Blockpass

Vaziri paced the floor of CMA's Cannon Street offices as he mimicked the dilemma of fintechs pondering, "what the consequences of their innovation are."

"Certainty is critical" as the market matures and the best way to achieve this is with regtech not regulation. Even if clear and relevant governmental guidelines were forthcoming, compliance stills mops up roughly 30% of operational costs leaving most fintechs unable to take the hit.

That's why appeal of integrated compliance for security token offerings is so strong. Who doesn't want a get-out-of-jail-free card sewn into their front pocket?

The main failing of the much-maligned coin offerings, the Blockpass CEO argues, is their pseudo anonymous nature. STOs, in this sense, are a different animal entirely. The sublime alchemy of Vaziri's approach is to introduce iron-clad AML, KYC and taxman-friendly protocols into tokenised products without diluting the crypto-anarchist spirit of those spicy ICOs.

"The key thing is we provide this infrastructure for STOs, for exchanges ... but we can't even know who our users are. We have maybe 6,000 verified users and we don't know who they are. It's the users themselves that store their own data, they have it in their own devices."

Not only are security tokens set to be compliant by design, their issuers and traders are too. Software like the kind available from Blockpass allows users to verify themselves. They can then use their new certified identity to trade on multiple platforms without having to repeat the process ad nauseum. This "low cost pre-verified compliance" actually allows vendors to earn rewards by contributing to a user's Blockpass verification rather than ponying up a third of its budget to achieve the same result.

Vaziri and Co. aren't content to stop there though, Blockpass intends to allow its users to establish self-sovereign identity. Such an idea - identity as controlled by you and not a third party - has applications far and beyond the mere trading of digitised assets.

Blockpass is not, therefore, "some centralised honeypot, sitting on [user] data" but a facilitator of "self-sovereign identity." Whilst this sounds great it does have one rather unfortunate drawback, identity isn't self-generated...

Like it or not, our identities are state-issued. So, no matter how watertight Blockpass' tech is, the information it's verifying (birth certificate, passport et al.) is potentially flawed. This point was raised by Matthew C. Le Merle of Fifth Era in the Q&A session that followed Vaziri's presentation;

"The really bad guys don't use their own birth certificates, driver's license or passport. They hack into the UK birth certificate database and they run off thousands of fake birth certificates.

They create fake driver's licenses and passports, then they come to you and get a wrapper that's secure, immutable and portable put around a fake identity ... and they run their frauds.

The government perpetuates 200-year old approaches to passports, driver's licenses and birth certificates. We don't have biometric, DNA-based birth certificates. That's the real issue. It's a garbage in, garbage out problem. I love what you're doing but you're putting a wrapper around fake identity."

Vaziri's response was clipped but to the point;

"If the UK government can't create a genuine identity, then I'm not sure I can solve that problem."

Sportingly, Vaziri then expanded the problem even further beyond Blockpass' current capabilities, specifically regarding financial inclusion, broaching the question; how do you verify persons without a state-issued identity?

"There's a button on a Huawei phone ... it says, 'all of your information is sent to the People's Republic of China, do you consent?' Err, no. But the same is true of Facebook. All of your data is on a server which the NSA can search at will.

We need to conceive a system that addresses verification at a core level, which is biometric but - and it's a big 'but' - without undermining the citizens themselves by putting them in a worse situation. I don't want to think about 1984-type totalitarian scenarios but if you hack into a biometric, you can cause much greater harm than you can by nicking someone's passport. But how do you do that? It's about putting the user first and not giving too much centralised control. So, yeah, don't click the button on your Huawei..."

Unfortunately, history has seen the inexorable rise of centralised authority (having been seized rather than given) and untold numbers have already pushed that button. 1984 was 35 years ago and whether you want to think about them or not, those types of "totalitarian scenarios" - as well as the inequities of the "really bad guys" - aren't hard to spot. Furthermore, they're proving increasingly difficult to ignore. ◆**TFT**

> **The sublime alchemy of Yaziri's approach is to introduce iron-clad AML, KYC and taxman-friendly protocols into tokenised products without diluting the crypto-anarchist spirit of those spicy ICOs.**

WealthTech funding fuels growth in UK FinTech investment

WealthTech companies raised more than 35% of total UK FinTech investment in Q1

Capital raised by UK FinTech companies reached £994.3m across 46 deals in the first quarter of 2019. The capital raised so far this year is at 37.8% of last year's total. WealthTech companies have been increasing their share of total annual FinTech investment in the country since 2016. This share has almost doubled from 17.3% in 2016 to 31.1% last year, showing investors' appetite to profit from the disruption of traditional banking models and fund innovative products in areas currently underserved by the financial services industry.

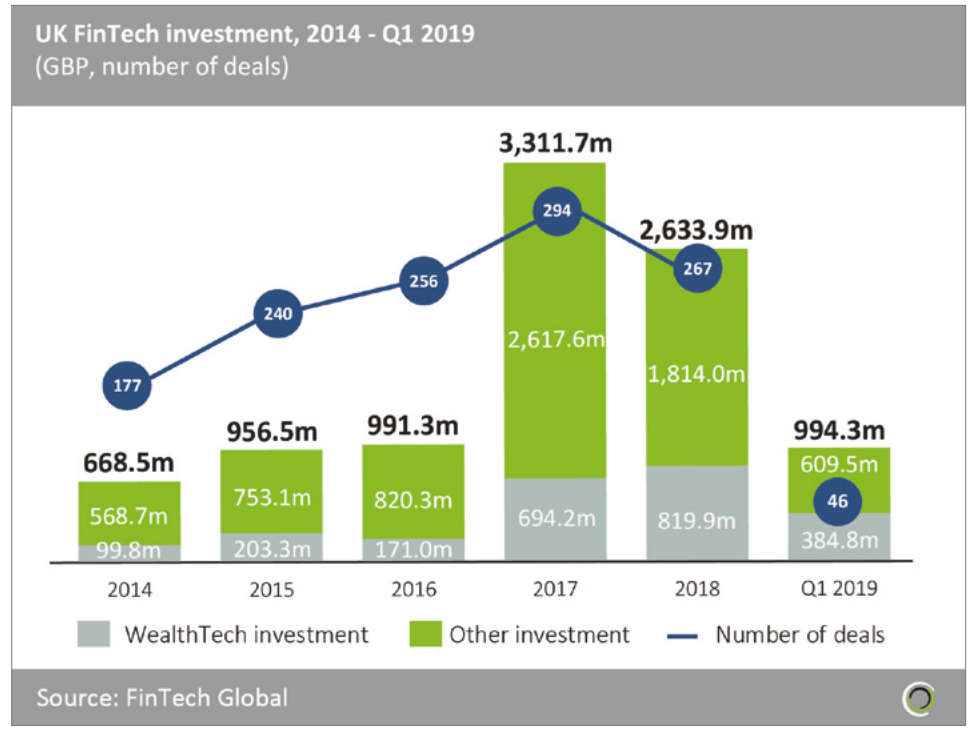
The average UK FinTech deal size has more than doubled over the last five years, increasing from £4.5m in 2014 to £11.2m last year. This increase was driven by the rise in the number of larger, later-stage deals as the UK FinTech ecosystem matures. This is demonstrated particularly in the UK WealthTech subsector with neobanks in the country raising large amounts of capital ever more frequently. In fact, there are 13 WealthTech companies in Europe which have raised more than $100m in total since 2014 and nine of these are headquartered in the UK (OakNorth, Atom Bank, Starling Bank, Revolut, Monzo, Tandem, Metro Bank, Nutmeg, Aldermore Bank).

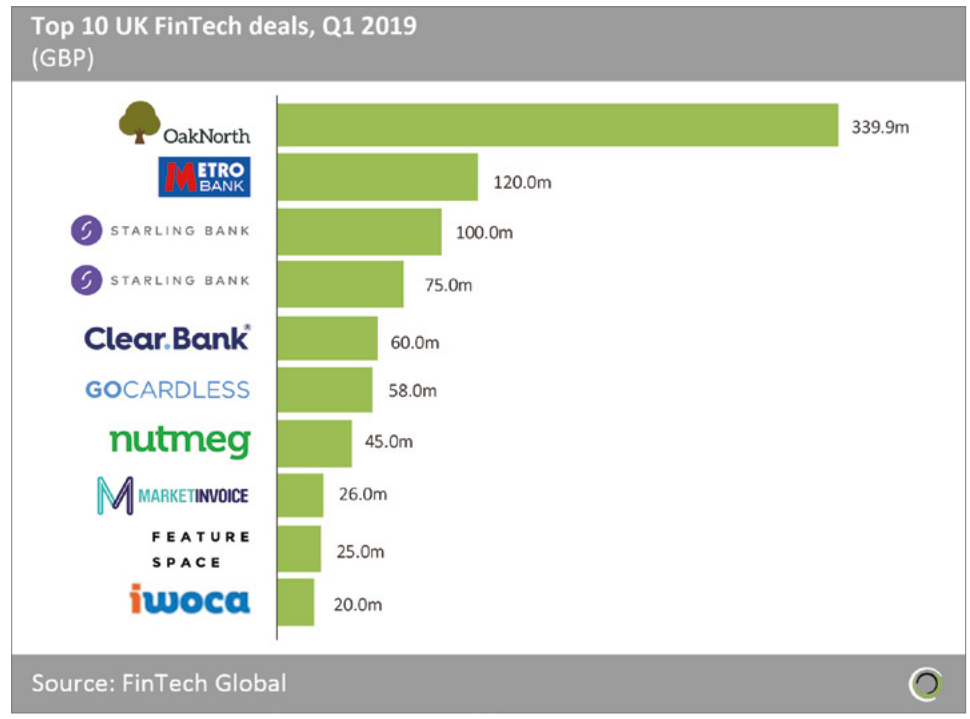
The biggest transaction in Q1 2019 was challenger bank OakNorth's $440m funding round. The company, which provides SMEs with business and property loans, has raised more than $1bn across eight funding rounds since 2015 and plans to expand into the US this year. Additionally, Revolut, another London-based digital bank, has plans to launch in Singapore later in 2019 - the first step in its expansion plans in Asia. Continued aggressive expansion by UK challenger banks could see them build international customer bases over the next few years and become leading actors on the digital banking stage globally.

The top five UK FinTech transactions in Q1 2019 were completed by challenger banks

More than £850m was raised by the top ten deals in the first three months of the year. Six of these top funding rounds were raised by WealthTech companies and all but one of these transactions were completed by online banks. As a result, 69.9% of total UK FinTech investment in the first quarter of the year went into challenger banks, boosting total investment in the country that quarter. The largest deal was OakNorth's previously mentioned funding round. London-based Starling Bank completed both the third and fourth largest deals in Q1. The mobile-only bank received a £100m grant from the RBS Capability and Innovation Fund. Metro Bank and ClearBank also received significant investment from this fund. These transactions are part of a scheme requiring RBS to boost competition in the sector as a condition of its bailout during the 2008 financial crisis. Starling Bank also raised £75m in a Series C round in February this year.

The remaining four largest deals, which did not involve a WealthTech company, were completed by companies operating in the Payments & Remittances (GoCardles), RegTech (Featurespace) and Marketplace Lending subsectors (MarketInvoice, iwoca).





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Forget Starting Up, It's Time To Scale-Up

You were once considered a start-up with a handful of employees and contractors, excited by the announcement of open banking and busy developing a platform to allow the world to view their personal finances at the scan of a fingerprint. Fast forward three years and you're going through your beta testing, perhaps you've even got a thousand test users, and your monthly burn means you're getting through that last round of investment twice as fast as you forecast.

JON DAWSON
Senior Manager at haysmacintyre

You're now considered a 'scale-up'.

Often even more challenging than the early years, you're now in a position where you have to answer to your investors. You're spending more time raising money than working in the business and the seven day working weeks you once loved are becoming more tiring.

Whilst it may seem overwhelming, it's certainly manageable. Here are some tips on how to deal with the growing pains you're experiencing.

Set targets

Having an end goal is crucial. It doesn't have to be an exit and might even be to develop a lifestyle business. For many, the goal will be an exit and planning for the exit as far out as possible is crucial. Do you have a magic number in mind? Do you want to stay involved post sale? Is your business right for a trade sale, corporate sale, IPO, LBO, equity crowdfund or a merger?

Having an end game in mind will prevent you from being distracted when you receive an offer out of the blue. You won't be forced to drop everything to focus on the intensive due diligence that is about to start (which is always more time consuming than you ever thought it could be). You want to have an idea of what an offer might look like and an expectation of when you might be ready to consider it.

With an end goal in place, working out your KPIs and personal performance targets along the way can be much easier. The trick here is to avoid vanity numbers. Business owners often talk about employee numbers when they talk about growth and forget about some of the core KPIs which can really impact their business, such as customer satisfaction, server downtime and cash reserves.

On top of business KPIs it's important to keep personal goals and motivations at the forefront of your mind. Some of you will be driven by annual sales or an exit valuation, but others might be driven by something much more intangible like a goal to deliver a payday lending service to those in need, without bankrupting them. Keep coming back to your goals when you're experiencing growing pains and use them to guide the decisions you make.

Raise well

Very few fintech companies are scaling at the pace they need to without serious investment. The speed of the industry is putting pressure on businesses to spend a huge amount on research and development to prevent being overtaken by competition. Raising well is crucial to survival and this means being organised. Without any hiccups, you should expect a 'Series Fundraise' to take at least 8-12 months to get across the line, and this is assuming you have all your ducks in a row before the process starts.

Start thinking about your investment before you need it and raise more than you think is needed. It's best to assume there will be delays in raising and your forecasts will underestimate how much you'll spend over the next 12-24 months. Fundraising will take up a huge amount of senior managements' time and you don't want to find yourself raising too often – get back to running the business.

Raising well also means partnering with the right investors. You might be a network driven business, benefitting from the advantages of having your customers fully engaged in the business and may decide that a suitable route for you is through crowdfunding. You might be a sole-founder who could benefit from an experienced support network and finding the right Angel investors might the right choice for you. For a lot of scale-ups looking to raise through a Series round, one or more institutional investor, VC, PE or family office will likely be your preferred option. Remember in all investor pitches you walk into, it's a two-way sale. Right now, securing the next round seems the most important thing, but remember you'll have to work with your investor for years to come. They'll all have different approaches and different levels of involvement in the business so consider this before you start looking for investment. Do you want the expertise of having an investor on your Board and involved in running the business or do you want to limit all contact to a call once a month? Look at their track record and speak to other founders of companies they've previously invested in. Speak to your advisors, they will be able to spot whether any of the proposed terms of investment seem unusual or should be avoided.

Surround yourself with the right people

As a start-up, the founder can be responsible for all decisions in the business and take on the responsibility of being the 'bottle neck'. Now you're a scale-up, this is no longer the case. You need to self-appraise and ask your team for feedback – what are your weaknesses and which areas of the business should you now be completely removed from? It's probable that you could hire a HR manager who will be better at hiring than you, or a Finance Director who will be more experienced to look after the financials than you. As Lee Iacocca famously said, "I hire people brighter than me and get out of their way".

It may even be the time to start considering whether you're best placed to be the CEO. Some Founders develop into fantastic CEOs, whereas others are much better at building a product than running a company. It's time to do what's best for your business if you really want to see it flourish.

If you are the right leader, now is the time to appoint a strong Board around you. This might include non-execs, angel investors or mentors as well as executive directors. It's also time to consider whether your advisors are right for you. Having experienced, industry focused lawyers, accountants, bankers and corporate financiers will be crucial throughout your next period of growth.

Culture

Maintaining a culture when there's ten of you under one roof is easy. Once you start expanding globally, employ overseas developers, have multiple offices or reach the unwritten rule of 50 employees, you'll notice that preserving the culture becomes much more difficult. You might not even be able to describe what the culture is, but just know it exists. The first thing you should do is write down what the culture was like in the early years so you can refer to this as you scale. This might take the form of values and a mission statement but be creative, there's no right way to do this.

A number of clients I work with have provided great examples of ways to ensure that the culture is maintained including away days, weekly open feedback sessions, 360 appraisals, flexible working conditions amongst others. However, all of them agree on one thing; the key is to hire with your values in mind. Perhaps the culture forms part of the interview process, or you might ask candidates to take part in a psychometric test, designed to highlight those individuals with similar values. Take them out of their comfort zone, do they still demonstrate the same values when under pressure?

There's no hard and fast rule to scaling a business. Different businesses have gone about this in very different ways and it's important to be unique in your approach. However, appreciating that you're in a different stage of the businesses' life to when you were a start-up will help you as your business develops and grows through the next phase.

For more information email jdawson@haysmacintyre.com

◆**TFT**

How Payments Technologies Feature in the Sharing Economy

The little industrial revolution of the internet has changed the way the world works, and there's almost no better example of this than the rise of the so-called sharing economy – not to mention the payments technologies that facilitate these new forms of transactions. The proliferation of an enormous ecosystem of app- and web-based platforms mean consumers are more and more renting each other's cars, houses, possessions, and time, but the one thing that has remained the same is that they still need to pay for the things they drive, live in, use, and hire.

PAUL MARCANTONIO
Head of UK/Western Europe at ECOMMPAY

While well-designed payments technologies tailored to the sharing economy make up the most noticeable part of the payment experience for end-users, it's the backup provided by human customer service teams that keep all those transactions between sellers and buyers running smoothly.

So what do we mean by the human touch? It means knowing where technology ends and people begin; which tasks on your platform are best handled by algorithms moving at the speed of light and which should be dealt with by experts and a critical eye. Innovative payment technology's incredible – it's what allows the sharing economy to exist in the first place, and can make the payment process silky-smooth for customers – but it can't solve every problem just yet.

Payments technology solutions for the sharing economy

First among the problems technology can't solve is... problems with technology. If you're a participant in the sharing economy, you need a payments technology solution involving the human factor. That is, if you run into issues with your payment gateway, you need to be able to contact a human being to resolve anything from customer authentication errors to a font not displaying correctly. What's more, that human being needs to be capable, professional, and familiar with the technology you're using, not just reading a script off a pre-prepared sheet. In the sharing economy, where apps and websites provide platforms for ever-more sellers to reach ever-more buyers, the potential for hiccups to occur can be pretty high. A lot of payment solutions companies flaunt their tech, but being able to get in touch with an expert who knows the ins-and-outs of your particular use case is more important than ever. That's why when you're looking to either establish a platform or share on one, you want to make sure there's a solid partnership in place that means you can pick up a phone, or send an email, and have a real life person guiding you and handling your issue as quickly as possible. Ensuring your customers enjoy a smooth payment experience necessitates a payments technology solution tailored for the sharing economy, which means being able to speak to an expert whenever you need to.

A second opinion on your payments technology

People aren't just handy for when tech goes wrong, they're vital to making sure it goes right. Every company operating an online storefront worries about security and the always present threat of fraudsters and malicious activity, but the rise of sharing platforms means there's more potentially risky buyers and sellers to keep track of than there has been in the past. That's one of those issues you want that speed-of-light tech to solve: combing through tens of thousands of users in milliseconds to check for ID fraud or scams on your platform. By pairing risk management tech with smart, manual monitoring, you can outwit malicious actors without the danger of false positives. Optimising your payments technology solution for the sharing economy means the possibility to have your security tech undergo human review. With some platforms facing truly enormous numbers of scams being run on their services, you're going to need cutting edge tech and a brilliant team if you want to expand.

Paired with smart design, robust functionality, and innovative payments technology, a team of smart humans backing up your algorithms and AIs can be the difference between linear and exponential growth. We live in an age that's obsessed with having the latest, greatest, biggest and brightest tech, and there's a good reason for that, but by using payment solutions that keep a human hand on the tiller, you'll be in a position to solve a lot of your problems before they ever crop up for your end users, and in a way that doesn't risk hurting their experience and dampening their enthusiasm for your platform. Besides, robots don't make for interesting conversation yet.

◆**TFT**

PRIVATE SECURITIES:

THE BASICS, THE ECOSYSTEM, & KEY AREAS FOR ARTIFICIAL INTELLIGENCE

JAMES BATY

Senior Vice President
and Special Advisor
US Capital Global

It is vitally important to understand the undeniable primary principal of investing: "The method of investing is irrelevant compared to the value of the investment itself." In considering where Artificial Intelligence may apply to Private Securities, let's first consider the basic private security issuance process, and the relevant actor ecosystem, along the way noting some of the areas of recent FinTech innovation. We address what are 'private securities', how are they sold, what are the functions in that process and what are some key concerns that AI can address? Then we'll examine three specific areas of possible related AI application in the near term. For illustration, the definitions and regulatory references apply to the US market, but are similar in other jurisdictions.

PRIVATE SECURITIES – THE BASICS

What are the basic types of private securities?

The key 'private securities' are equity shares, fractional loans, and derivatives.

Equity shares - stocks, or shares, are a main source of finance for a company. These convey fractional ownership to the investor, with typical owner rights... voting, dividends, potential capital appreciation, and liquidity options. Key concerns include the mechanisms used to value the company for pricing of the shares, and any market or operational risks. Recently this form of ownership investment has been augmented by the potential advantages of digital securities, i.e. 'tokenisation' that may enable transactional efficiencies and easier liquidity in a theoretical secondary market.

Fractional Loans – borrowing money is another key source of business capital, appropriate to operating businesses with assets and income. In contrast with single source loans from financial institutions, fractional loans are portions of loans, that are offered to individual investors. While equity shares offer potential appreciation, fractional loans offer a specified income stream (still of course with some risk). On the digital front, this vehicle has become popular with investors via the creation of many new peer-to-peer lending companies.

Derivatives are a financial security in the form of a contract where the value is derived from an underlying asset and its potential change in value or income stream. Derivatives include futures contracts, forwards, options, and swaps. While a significant portion of derivatives are used historically to hedge other investments, derivatives are also a way investors can participate in value appreciation of underlying assets, but don't carry the ownership participation of equities. Technology for data streams of complex market information provides additional fintech innovation for derivatives contracts.

Whether the private security is an equity, fractional loan or derivative, there are risks and the investor must be concerned about valuation. Without yet considering applications of artificial intelligence, it is useful first to understand how these private securities are sold, the nature of their 'regulation', and what are the entities providing key functionality to support the private securities market.

Who can buy a private security?

Under the US Securities Act of 1933, a fund must either register its securities offering with the SEC or operate under an exemption from SEC registration. Under specific regulations, 'Private securities' are exempt from registration, thus less regulated than the public market, and as such are reserved to sophisticated investors, meaning those with sufficient investment capital to be able to assume the risks. In the US this basically includes 'Accredited Investors' or 'Qualified Purchasers. The majority of unregistered securities offerings utilise the exemption under Rule 506(b) of Regulation D, which participation to 'Accredited Investors', basically those having either a net worth that exceeds $1,000,000, or income in excess of $200,000. Section 3(c)(7), exempts funds from registering if they are owned exclusively by 'Qualified Purchasers' who own $5,000,000 or more in investments. There are other regulatory nuances (e.g., limits on numbers of participants) and mechanisms of institutional participation, but these categories are the basic participants in private securities – those who have significant investment capital, and can assume the risks of evaluating unregistered securities.

How can private securities be advertised?

Rule 506(b) of Regulation D is restricted to private network solicitation, while Reg C allows general advertising. Regulation S is available only for offers and sales of securities outside the United States by US firms, but of course these may be subject to the foreign jurisdiction resident's regulation. There has been a large amount of development of the digitisation of securities, however, as we can see from the press and the general response of global regulatory agencies, from the regulators perspective, while digitisation of securities may offer improvements in transactional efficiencies, from the regulators perspective, a digital security is still a security, subject to the same rules.

Who can custodian private securities?

Obviously the buyer themselves may hold the private security, or the security may be held for the buyer by the Issuer, or a regulated person under a power of attorney (POA). This includes commercial custodian firms. An interesting new fintech challenge includes the unique issues presented by custody of digital securities. While some promote the basic idea of 'self custody' by the investor based on possession of the digital key, there are also commercial custodian firms for digital securities.

How can secondary sales of private securities be done?

Basically secondary sales, must conform to the same rules and to the same persons as primary sales....except that to advertise a secondary sale one must have an additional license. Alternative Trading Systems (ATSs) which have been around for 50 years or so, enable access to these secondary trades. And there is a flurry of new activity around existing, and newly formed, ATSs enabled for the secondary trading of digital securities.

How do you aggregate demand/participation and what use is an LP, SPV?

You can make a share a digital security sell and trade similar a public security, but there are limits to the number of participants or you are required to report like a public company. Another alternative is the formation of a Special Purpose Vehicle (SPV) which can sell a derivative ...economic value in the pool of shares, which allows greater participation in income, while also avoiding cap chart complications of direct participation. You can do the same thing with a pool of loans and sell a derivative of that pool which avoids the 100 person limit for a fund. However, the use of SPVs raises additional information and compliance issues - it is very important to make sure the counter-parties are regulated and trusted by the manager of the SPV, understanding the valuation of the securities and trusting the platform where you sent your money to.

PRIVATE SECURITIES – THE ECOSYSTEM

So what roles do securities professionals provide in this process?

We have all seen in the past few years where issuers have tried to navigate their own issues, and in some cases this resulted in regulatory citations, return of investors money, or loss of investments to fraud. The case of Theranos, in spite of the presence of lawyers, but without a licensed responsible broker dealer, ended in a lack of transparent valuation and a major fraud case. Countless ICOs tried to skirt the rules altogether, and in the best cases had to pay fines and return funds raised, while in the worst cases simply disappeared with investors funds.

Securities professionals, licensed professionals.... broker/dealer, attorneys, custodians, transfer agents, ATSs; each provide separate and specific functional roles – oversight, due diligence, transparent management, independent transfer and controls. Beyond the functional roles of these professionals, they also help construct an overall strategy for issuers that including deciding on the appropriate initial vehicle (e.g., 506C), the relevant contract terms (re. voting rights, right of first refusal on secondary sales [ROFR clause]). And in the longer term what is an appropriate multi-stage plan e.g., combining an initial round equity financing, with subsequent growth financing, operational loans, and subsequent liquidity events. Beyond the 'fintech' considerations, we can see that this involves important 'regtech' issues (e.g., understanding the value of general solicitation issues). For investors the ecosystems can help select appropriate individual investments and construct a portfolio that addresses their life goals and investment targets.

The Private Security Ecosystem

So we can see that, beyond the issuer, there are special defined

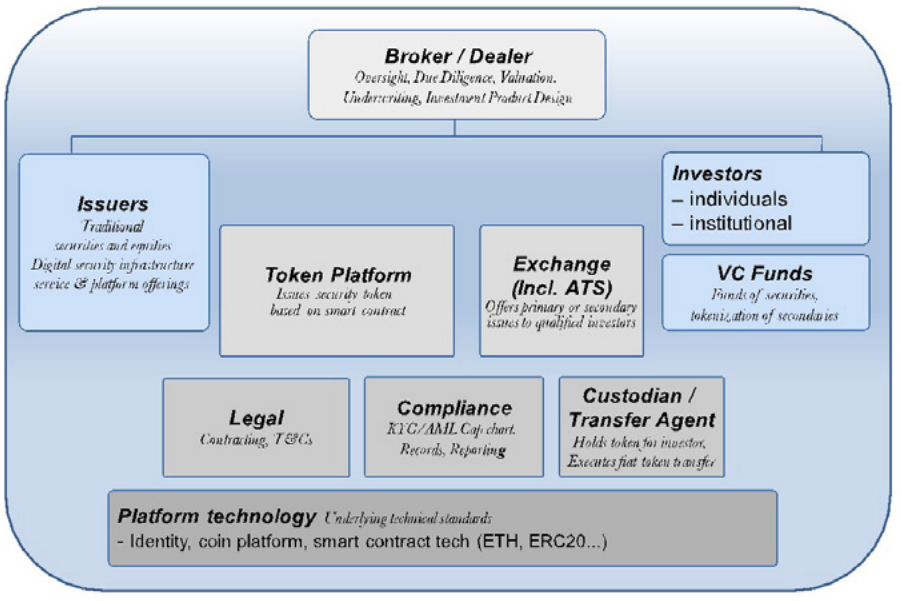


fig. Private Placement financial professionals digital security ecosystem

roles for securities professionals that contribute to the success of issuers and investors. Broker/dealer, custodian, ATS, etc. and these have been augmented for digital securities by specialized security token platforms and traditional roles such as custodians and ATSs that are extended to accommodate digital securities. Generally, the broker/dealer acts as the 'ringmaster' calling on other professionals, e.g., a token platform, as appropriate.

WHERE CAN ARTIFICIAL INTELLIGENCE HELP?

While there are many popular general Fintech applications of AI (e.g., customer service 'chatbots'), what are potential significant applications specific to Private Securities? First, understand that 'AI' includes many different technical forms including from basic rule based systems that efficiently execute specified instructions, to machine learning systems that can discover new patterns from real time data streams.

Portfolio Analysis (Roboadvisors)

Especially for sophisticated investors it is important to consider not just individual investments but an overall portfolio strategy – stocks, bonds, alternatives, etc. what portion of each based on the investor's goals. Increasingly the functionality of investment advisors (RIAs) is being incorporated into AI systems that provide analysis, either directly to the investors, or used by RIAs for their clients. Roboadvisors are digital platforms that provide automated, algorithm-driven financial planning services with little to no human supervision. A typical roboadvisor collects information from clients about their financial situation and future goals through an online survey, and then uses the data to offer advice and/or automatically invest client assets. This technology can reduce the cost of delivering portfolio advice to larger audiences of investors and is especially attractive to technically inclined investors interested, for example, in digital securities and peer-to-peer lending. This can be achieved with

relatively simple rule-based AI that just applies standard portfolio analysis with greater efficiency,

Valuation and Risk Assessment

As mentioned, the theory of private placements is that they are restricted to sophisticated investors as they are able to tolerate greater potential risk than the general public, but this does not mean they are not risk sensitive. AI can apply not just at the initial investment valuation stage, but also may make possible continual monitoring of counterparty credit risk and operational risk for the issuer entities. This would involve more sophisticated AI techniques that enable real time pattern analysis, to perform complicated analysis.

Fraud Detection

With the increasing movement to digital securities, complicated offerings, automated trading and high-velocity transactions, there is an increasing development of AI technology to enable fraud detection. This is the subject of considerable research with the regulatory agencies. For example, the SEC is using both 'supervised learning' machine learning to identify potential fraud patterns in the text of SEC filings, and it is reported that these techniques are five times better than random in finding language that merits enforcement referral. Unsupervised learning algorithms are used by the SEC to identify unique or outlier reporting behaviors.

Conclusion

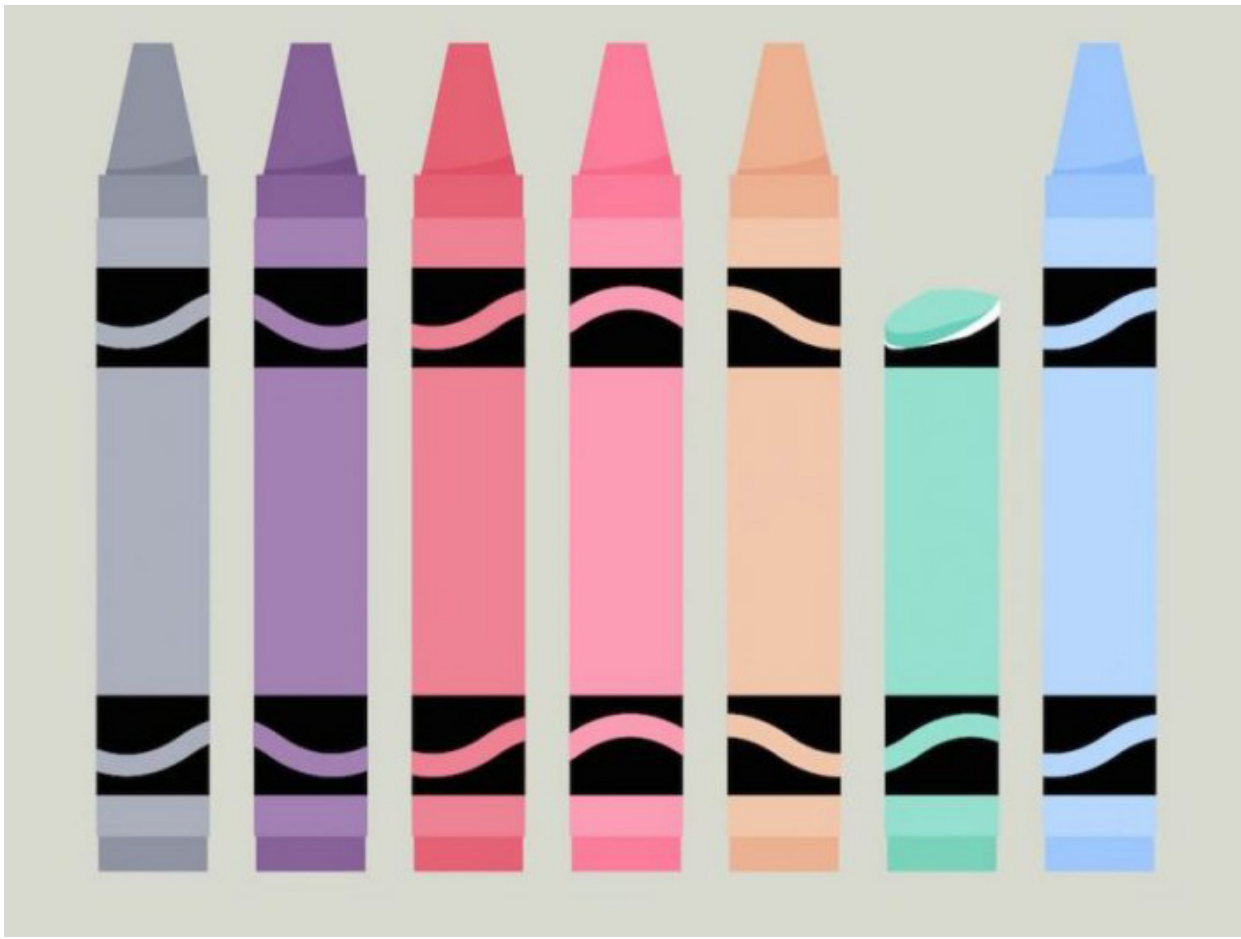
Private Placement investments offer sophisticated investors the ability to invest in equity, fractional loans and derivatives, with a potential for attractive returns, but these investments are restricted to accredited investors and qualified purchasers because they are exempt from normal securities filings and may present additional risks. Understanding these risks and having a clear understanding of the underlying investments value is critically dependent on the full ecosystem of financial securities professionals – broker/dealers, compliance, legal, exchanges, custodians, etc., and these are being extended and augmented by the advent of digital securities.

In the same way that digital securities can offer additional transactional efficiencies over traditional offerings, artificial intelligence mechanisms - from simple rule based advisory systems to real-time machine learning risk analysis and fraud detection - also offer significant new fintech implementations and improvements on historical manual processes. A corollary to the indelible first principle of focusing on the value of the investment is: "Make sure the counterparties to the investment are as good as the investment itself". ◆TFT

Branding Fintech: Who Likes the New Uniform?

David Shalam, Founder and Creative Director, Studio 2br

Fintechs are associated with innovation and disruption of the status quo in financial services. So why do so many fintech brands look the same?



The shakeup of the financial services industry has been a long time coming. Digitalisation is bringing democratisation to the financial products and services we all depend on day to day. It's now the customer who decides how we spend, save and borrow, not the bank manager.

We no longer need to go to the bank at all, because what we used to do there can be done via apps or online instead. Our choice of providers has never been so wide or varied either. It's not just the usual suspects any more. There's a new universe of financial apps and platforms out there to discover.

What an empowering universe it is. It means we can go cardless as well as cashless. Shop now and pay later. Design an investment portfolio in minutes. Get a mortgage without getting off the sofa. Do our accounts without an accountant.

No safety in numbers

As a branding and design consultancy with clients that range from startups to global banks, we keep a close eye on trends in financial services branding. The early days of the fintech revolution produced some true pioneers who teamed novel thinking with bold attitudes. Monzo set the bar with its commitment to creating an outstanding brand. Others have followed the trail it blazed – often too much so. Because the current trend in fintech branding is towards uniformity rather than originality. Brands are blending in when they should be standing out.

We've seen this before in financial services. The herd instinct is strong. Look at the heritage symbols and conservative colours used by many established financial institutions to emphasise their longevity. Why has one status quo been replaced by another? And what are the branding pitfalls for fintechs to avoid?

What's my name?

Enigmatic names have become popular in the fintech world. As well as Monzo, there's Habito, Kinsu, Tink, Klarna, Trussle, Viola Black. A short name is certainly preferable for practical reasons since it takes up less screen space. But at this stage in the digital cycle it's difficult for startups to secure domain names that are also descriptive, since many of those were taken long ago. Yet it's worth the extra effort to find a name that at least hints at what your business does, because that provides a stronger platform for your brand story.

Habito is an online mortgage broker. The name of payments platform Klarna means 'to settle' in its native Swedish. The brand risk with a cryptic name is that it can confuse and even inhibit consumers if it feels awkward to say. But an unusual handle has not proved a drawback for some startups. Just look at Uber. And its rival Lyft shows how to work a name that achieves the holy trinity of being short, descriptive and distinctive.

How do I look?

Current trends in fintech visual identity include design minimalism, flat illustration and a pastel-led colour palette. These are so prevalent they are becoming a cliché. There is an absolute sea of teal out there. This is obviously intended to give these brands a friendly, human feel that will appeal to the influential millennial demographic. But what is intended to attract can just as easily repel if it comes across as inauthentic.

The way to reach millennials in particular is to be more individual. Even if what you do may not be that different from your competitors, you can win hearts and minds by giving your brand more personality. Klarna's business is transactional, but the Klarna brand makes the experience a lot of fun.

Does that feel good?

Some fintechs seem to forget that for any digital business, the user experience and the brand experience are one. Users expect your app to work. It's how much they enjoy using it that keeps them coming back. That's why it's so important to build the brand before you build the app. No matter how good your technology is, it will not differentiate you in a market where everyone is as digital as you are. You need to create emotional ties. That comes from the brand experience.

Every brand has a killer touchpoint. For Apple, it's become the iPhone. For a fintech, it's your app. Monzo's brand is all about putting the customer first and that promise is evident in the user experience. The Monzo app is everything the customer wants: easy to use, super secure and designed to make life easy for the customer rather than the company. The Monzo customer can deal with a lost or stolen card as smoothly as any other transaction. Anyone who's had to dial a number, and then another number, to speak to the relevant department, which promises to get back to them and doesn't, will appreciate how refreshing that is. Monzo's website is designed to support the app too, not the other way around..

Go your own way

To make sure your brand doesn't look and sound the same as everyone else you need to be single-minded. Adman Maurice Saatchi advocates brutal simplicity of thought. That means getting your story straight and telling it in a simple and authentic way, without compromise. Klarna's brand concept is smoothness. The way it owns that is exemplary. Check out the website or app: we love the smooth swagger.

By all means look at what others are doing, but don't be seduced by it. Stick to your own path. It may wind and you may even pivot in a new direction along the way, as many have before you. But you will always know who you are, and so will your customers.

Originality endures

Get this right and you will never look back. Just look at the success of one of the first fintech brands. Launched in 1989 as a branchless bank providing 24/7 access, First Direct is still going strong.

The First Direct brand hasn't changed all that much over time. The descriptive name has endured. The visual identity continues to be based on monochrome type, because the essence of the brand is to make banking black and white. The tone of voice puts that promise into words through copy that's honest and straightforward. You know what to expect from this business and it stands out in a crowded marketplace. That's all down to the brand.

It takes courage to be truly original. We always advise fintech clients that it's actually riskier to follow the crowd. With so much demand out there for innovation, putting on the same uniform as everyone else is not just boring: it's bad for business.

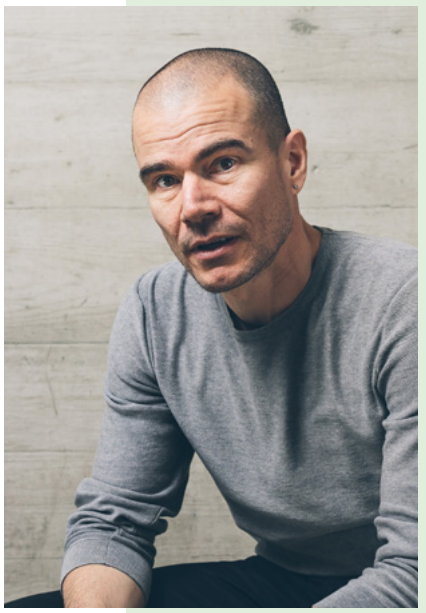
◆TFT

> **No matter how good your technology is, it will not differentiate you in a market where everyone is as digital as you are.**

THE GRAZ GATSBY:

PARKSIDE CEO ON THE UNDENIABLE VIRTUE OF GOOD UX

RALPH HARREITER *is a CEO with serious vision. Along with his colleagues at Graz-based Parkside, he's bringing a standard of user experience to fintech which consumers not only sorely need but richly deserve. Here, Harreiter talks to TFT's senior editor,* **MATTHEW DOVE,** *about legacy challenges, home-town pride and airport misery...*



Ralph Harreiter

OCCUPATION

CEO, Parkside

BIRTHPLACE

Germany

BOOK

Zen and the Art of Motorcycle Maintenance

FILM

Down by Law (a 1986 black-and-white indie flick written and directed by Jim Jarmusch)

HOBBIES

Snowboarding and skiing - "That's kind of obvious as I'm Austrian!"

The Fintech Times: What first attracted you to working in fintech?

Ralph Harreiter: That actually didn't happen on purpose, that was more accidental. When we started it was a totally new domain for Parkside. We were contracted by a client who wanted us to work on UX and UI for financial products. What we really liked about it was the actual challenge of working with complicated fintech applications to make them usable, to apply user experience to a financial product. Working on UX, even for a B2B product, was what we really liked in the beginning.

TFT: And why UX specifically? Did you spot a gap in the market?

RH: In the first place, it wasn't a strategic approach. We just liked the challenge. We liked to break something complex down into digestible parts. We looked and we saw that, especially in the fintech market, there are lots of opportunities because there's still tons of legacy applications. That's when we said, "Okay, let's focus a little more on fintech products."

TFT: What are the major problems facing traditional financial institutions?

RH: When we talk of traditional institutions, I would assume that there are a couple of main challenges and problems, and some that we might not even be aware of. However, from our perspective, as software developers with a UX focus, the challenge that the corporates face is that they're corporates!

They're slow and for many years they haven't had a user-centric approach. They're also dealing with numerous legacy applications, so they're not just slow in innovation and adoption of new technologies because they're corporates but also partly due to security issues. Then there's regulatory requirements to think about. It's hard to move fast. That's what we see as the biggest challenge that those corporates need to tackle.

TFT: What can fintechs do to speed them along?

RH: Let's look at it this way; fintechs, which are often startups, or external partners like Parkside have the advantage, and it's one simple thing. They are not part of the corporate structure. You don't have to go through however many departments to get something approved, you can do what you like to do. For this reason, at Parkside, we always take the user's perspective and we always come from a user first approach. That's in our DNA. For us, that comes without question, we just do it whereas the corporates have to learn it. This is our biggest advantage, there is no legacy we have to deal with at least when we're working on new stuff or on separate projects for corporates. And the same goes for startups but with them it's the user focus and smaller teams.

A lot of companies in finance and banking simply don't have the talent, the engineer talent as well as the UI designers. Many corporates, and we're working with some of them, they're just not able to attract this kind of talent. There are engineers who want to work on new technologies but when they think of, let's say a bank, they don't think "Oh wow, I'll get to do all this cool, crazy stuff working for a corporate."

TFT: How important is UX to the mass adoption of fintech innovations? One of the major complaints that we hear about innovations like cryptocurrencies is that they're practically impossible to use.

RH: Well, that's my belief too. You need to look at UX not just from the part of UX which deals with design but the whole user experience. In my opinion, UX takes in the whole thing, the work flow, every process, everything. I believe UX is key for new technologies or for new products in the fintech area in order to achieve mass adoption. I don't know if it's a good thing, but I would assume that for the majority of users UX is way more important than, for example, security. People choose products that are usable, products that work! It depends on the area you're talking about, of course, but in my experience people want products that work and that have good UX. With security and everything else they're like, "I trust you." In Europe, perhaps, there's more focus on security but UX is still absolutely key for the mass adoption of new technologies especially in the fintech market.

TFT: What advice would you give to fintech and incumbent companies developing fintech products?

RH: There's different advice I would give.

So, for startups, the one thing I would tell them, and it's a sensitive area, is do not betray people's trust. You earn trust and from time to time you see startups that don't work out. It's not because of their product or UX but because of trust issues which is bad for the whole field.

For the corporates, it's actually what I alluded to earlier. Startups and external partners can move so much faster, and they're already doing that. So for the corporates, my advice would be to work with startups. They can start innovation programmes, they can build separate departments and we're seeing that happen. If they don't want to work with external partners, they can build their own departments which often sit outside of the company. They don't even need to be in the same building..

TFT: What do you consider to be Parkside's greatest achievement so far?

RH: In reality, it's nothing client or project related. Yes, we're working with LinkedIn, we're a trusted vendor to them and we've earned their trust. We also have a stellar reputation with the clients we work with. What we're proudest of is having been able to build a company like Parkside in Graz. Graz is a super nice town, it's a university town, however, it's not huge (it has a population of around 300,000 people).

Here we've been able to build a truly international company, both people-wise (Parkside employs 72 people from more than 20 different nations) and in-terms of 70% of our revenue coming from overseas. That's something I specifically like, that's something of which we are very proud.

TFT: This edition's cover story features AI in finance. How do you expect the use of artificial intelligence to affect user experience?

RH: I would say massively and in a great way, hopefully. As I'm flying a lot, I often use this as an example of how AI in general will help us and it also applies to the fintech space. Imagine calling the helpline of either Lufthansa or British Airways. Today, you're waiting maybe 10 to 15 minutes and then there's someone who tries but cannot help you. With machine learning and AI in the near future, imagine you call the hotline and a friendly voice picks up immediately and can actually answer your questions and help you. That's the first iteration.

The next iteration is, when I'm calling they already know what I'm going to ask. The final iteration is that I don't have to call because, based on AI and machine learning, they will reach out to me actively and contact me with alternative options for the flight that was cancelled.

Today, if your flight gets cancelled, that's a super bad user experience. You're at the airport and nothing works, you have to wait. That's a real life experience that will be made much better by machine learning and natural language processing. I believe that if it's done in the right way, machine learning will be greatly helpful and I think that will apply to every single sector, not just the fintech space but everything. You need to look at the user experience as not just the "screens" but the whole experience, i.e. the offer that the product is trying to make or the processes that might be adapted to me personally. I think that machine learning will be a huge shift towards better UX.

TFT: Flight details are one thing but bank accounts are a somewhat different proposition. Do you think consumers are ready to trust proactive and predictive systems with their money?

RH: That's a good question, I don't know but we will see. That all depends on how it's used. I would say that if people have the feeling that the AI is being helpful and not making decisions on their behalf. Feeling in control will be key, that feeling of, "I've got everything I want and everything works out as I want it to, however, I'm still in control." I think that might be the key. Of course, there will be products and companies that do it better and there will be companies that don't do it in the right way. We'll see both kinds.

There's little doubt which kind of products and companies the Graz Gatsby and his band of UX specialists will be working with. As the undeniable value of good fintech user experience manifests itself even more prominently in the coming months and years, we'll undoubtedly be seeing a lot more of Ralph Harreiter and Parkside as well... ◆**TFT**

Asset management and AI's potential

Artificial intelligence (AI) and big data are dramatically reshaping the way in which the financial industry operates. Asset management, in particular, is being disrupted by AI's ability to mine enormous amounts of data very quickly, which makes it possible for asset managers to generate alpha by reviewing both structured and unstructured data.

Daniele Grassi, CEO of Axyon.AI

Daniele Grassi

Technological innovation has been an ongoing focus for financial services for years. AI, however, represents a major leap forward, as this technology can offer vastly improved efficiency when it comes to the data-heavy tasks present within the industry. At the same time, AI allows firms to move beyond traditional methods of analysis and use more sophisticated indicators that rely on alternative data sources and new, machine learning-based algorithms.

The true advantage of AI is its ability to learn unconventional patterns in large quantities of data without being explicitly programmed to do so. While human processing did most of this work previously, AI makes it possible for asset managers to uncover new and complex insights and make connections that would be impossible for a human to identify.

For example, AI can obtain real-time inflation rates using the online prices of millions of items or estimate agricultural yields by analysing satellite images of specific locations. Asset managers can then use these findings to better inform their business decisions and asset investment.

Deep learning in asset management

AI is able to draw conclusions from disparate sets of data by using 'deep learning' algorithms that reproduce the workings of the human brain in processing data and recognising patterns. Deep learning has already achieved widespread success in computer vision, natural language processing, machine translation, as well as speech recognition, and is the most popular area of research in the machine learning field.

It is no surprise, then, that deep learning is being adopted to predict financial market behaviour. Several hedge funds already rely on this technology to receive predictive insights on key variables, which are then used to determine strategies for investment. Systematic macro funds, for example, are starting to deploy deep learning models for forecasting economic variables, such as GDP or inflation rates.

However, more generally, a growing number of investment managers have adopted deep learning practices to reduce human bias within investment choices. This is a hugely appealing aspect of AI in asset management, as it removes any unquantifiable 'gut feel' reactions and enables asset managers to base their decisions purely on data driven results.

Deep learning can also be used to identify patterns in other areas, such as economic data, to predict the performance of specific assets. These predictions can range from the very short-term, even just a millisecond into the future, to a more medium-term outlook, such as in several months' time. The asset manager can also target different performance indicators, like market volatility and the rate of return on investment. AI can give a far better indicator of market outcomes on specific assets, and thus helps to inform investment decisions far better than human analysis ever could.

Modelling the future

However, in order to remain a leading technology for asset management, AI will need to continually build upon itself. In particular, it will need to anticipate many different variables, ranging from market changes and investment in new industries to general socio-economic changes that impact investors. This is a new frontier for the asset management industry, and one that could yield massive returns if harnessed effectively.

Axyon AI is currently exploring how this process can be achieved using a class of machine learning models known as Generative Adversarial Networks (GANs). GANs can be used to simulate future market scenarios by having two neural networks work against one another. One neural network, known as the 'generator', produces fake market scenarios while the other, which is labelled the 'discriminator', decides whether that data is real or false. As the discriminator learns to spot the false data, the generator improves its practices to make the next set of data, or market scenario, even more realistic.

Practices like GANs are looking to provide a more sophisticated alternative to the well-known technique of 'Monte Carlo simulations', which have traditionally been used to simulate various sources of uncertainty that could affect the value of an asset or portfolio. While these have worked to help with stress testing and sensitivity analysis in the past, GANs could become far more effective at producing a more accurate image of the outcome, especially from the risk perspective.

Building a valid portfolio

It is not just in market analysis where AI supports asset managers, however; its application also helps develop a reliable portfolio for the investor. Currently, many investors are still reliant on the Markovitz mean-variance framework, which was established over 60 years ago and does not completely account for the analysis opportunities in today's environment. When the Markovitz framework was created, data sets were rare and expensive. By contrast, there is now a wealth of information that investors can use to help inform their decisions in building a reliable portfolio.

As a result, traditional portfolio optimisation is no longer the only way of building an effective range of assets for investment. With AI now able to work with higher degrees of uncertainty and digest large quantities of data, asset managers can better estimate the expected return given a target level of risk.

Human involvement

With the far-reaching advantages that AI offers to those in asset management, it is easy to see why businesses may be concerned about how these innovations might impact the workforce. While there have been numerous reports on the negative impact of automation, AI has the potential to streamline processes and improve efficiencies within asset management.

Nevertheless, machine learning, AI and deep learning algorithms still require a degree of human oversight to contextualise their findings. While AI offers huge advantages to investors, there is sometimes the chance that its decisions can be based on correlations rather than causations.

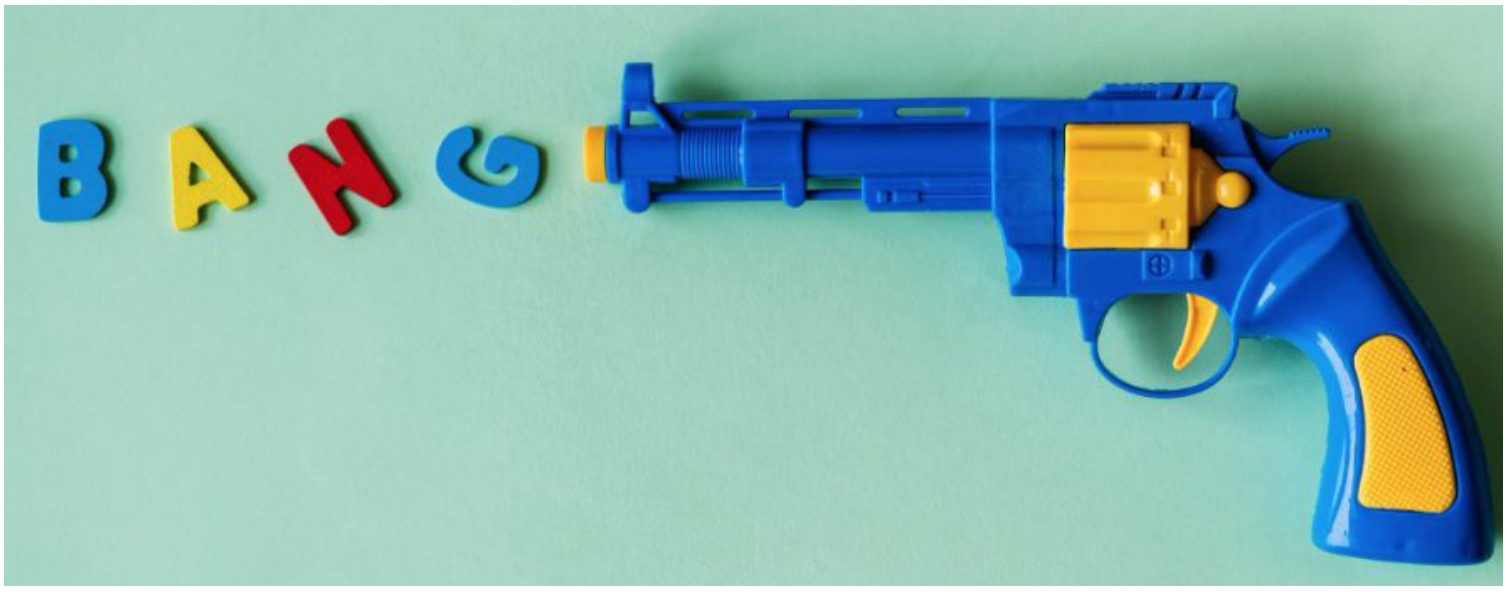
For example, AI may draw a link between ice cream sales and sunburn, predicting that when more people buy ice cream, sunburns increase. However, a human understands that good weather will lead to more ice cream sales and people staying outside in the sun for a long period – subsequently leading to a higher rate of sunburn cases. As a result, AI will not remove the human element of data analysis altogether, but will instead support the data-driven, back office functions that have historically been at risk of human error.

Indeed, AI can help active managements in their challenge with passive ones. Machine learning and AI can provide more insight with less human effort, leveraging the increasing available data. Through this automatic analysis of large quantities of data, asset managers will be able to reduce management costs by limiting the manual analysis of data and fundamentally improve the organisation's processes. In this way, AI actually enhances the work being done by humans, allowing managers to make better decisions and draw from more reliable data analysis.

AI already offers unprecedented benefits for many industries, but there is a wealth of potential for this technology in asset management in particular. As AI develops and improves even further, it will continue to drive innovation within the investment sector.

Although there are still some understandable concerns about the security of jobs with AI adoption, the reality is that top-skilled professionals will be augmented by this technology, rather than replaced by it. As a result, firms will be able to streamline internal processes and enhance the growth of the business, rather than focussing on data-heavy tasks that can be completed far more effectively by a machine. ◆**TFT**

IEO: Big Bang or Big Puff?



Last year's Initial Coin Offering hype turned ICO into a household name for both investors and for crypto projects – and was followed by a new fundraising model – Initial Exchange Offering (IEO). IEO is the same as ICO, but run through an exchange, or set of exchanges, that conduct the token sale as a counterpart.

Kate Goldfinch, Associate Editor

Although ICOs have failed to achieve mass adoption, we see many predictions that Initial Exchange Offerings are the new trend, and the fundraising scheme of the future. Considering that exchanges are strengthening their role in IEOs as sole market players, we observe the fast-growing infrastructure serving Initial Exchange Offerings on the crypto market. Let's consider the key market players.

IEO infrastructure

In reality, the IEO era began its history from December 2017 when Binance – as the biggest global cryptocurrency exchange in terms of trading volume – hosted two IEOs – for Bread (BRD) and Gifto (GTO) token sales. In January this year, Binance hosted a BitTorrent token sale, and then conducted Fetch.AI (FET) and Celer Network (CELR). Moreover, Binance announced the upcoming IEO for Matic Network.

According to its official website, Binance is building a whole ecosystem in which each unit delivers specific benefits. For example, the Binance cryptocurrency exchange provides a platform for trading more than 100 cryptocurrencies, Binance Launchpad is the exclusive token sale platform, and pioneered the Initial Exchange Offering niche on the global market. On February 20th this year the giant launched the Binance Chain Exchange testnet, announcing its new decentralised crypto exchange BinanceDEX – able to support 'millions' of crypto assets, with low fees and no delays, and a promise of going live by the end of April 2019.

However, Binance is not the only exchange supporting IEOs. The popularity of IEOs is growing. Twelve crypto exchanges have announced that their IEO platforms are going live this year. The IEO market players among them include Bittrex International, KuCoin, gate.io, Huobi, Bitmax, Bgogo, Bilaxy, Bitforex, EXMO and others. Most of them have their own coin, but a few do not. The majority of exchanges operating an IEO platform require from participants launching tokensales initially to purchase an exchange's token.

Experts believe that the IEO frenzy is simply a re-run of the whole ICO story, with its origins in Binance's offer of a successful and simple solution regarding the launch of token sales and raising funds via a crypto exchange model. "IEO saves ICO projects from running around the markets in search of users. Exchanges offer them a concentrated targeted crypto audience in one place – e.g. at the Launchpad (Binance's integrated IEO platform)," Kir Kelevra, Bitcoin fundamentalist and cryptotrader argues. Even after the bitter experiences of ICOs, investors are still falling for the IEO bait – because the trading prices of many tokens currently is substantially higher than their original tokensale price.

IEOs' Pros & Cons

IEO platforms are promising the following benefits to their participants:

- using their membership base to recruit investment for projects
- carrying out preliminary analysis and selection of projects, to lower the risk from scammers
- to provide a fundraising route within a legal framework

In practice, IEOs don't have the appearance of an ideal mechanism. "IEO does not bring any improvement for the cryptoindustry. For tokenised crowdfunding, whatever one may say, you still need manuals, which regulators must provide. Until this happened, the exchanges began to take on too large obligations, conducting token sales, deciding from themselves which projects were scam and which were not. This is not fair!" Kir Kelevra concludes.

A further drawback is that, in the absence of regulation, IEO platforms can set up business models which are open to manipulation. Pavel Kravchenko, the co-founder of Distributed Lab, reminds investors of the important rules which govern traditional markets for raising capital;

1. Independence of judiciary, legislative and executive powers.
2. Separation of an exchange, clearing house and custodian.
3. Prohibition on investing one startup shares into another to inflate the valuation.
4. Prohibition on the implementation of projects and audits by one company
5. The rule that claims that the company's accountant and financial director are different people.

"If you consider the working practices of decentralised market players, it turns out that their stability is a long way from that of the traditional sector. Furthermore, some players in the crypto world (such as Binance) are combining resources which should be kept separate. For instance, Binance went from being an exchange, custodian and clearing house, and decided to be an investment bank, underwriter, and even an auditor. These are just problems waiting to happen" Pavel Kravchenko argues.

In conclusion

Overall, the IEO market is extremely unstable, very unpredictable, and only now being structured. Its primary characteristics are non-transparent partnerships, manipulation, and collusion.

One of the greatest issues in the current IEO market is the possibility of partnerships between the founders of one of the fastest-growing cryptocurrencies, Tron, and the owner of BitTorrent Inc (a young Chinese entrepreneur named Justin Sun = widely tipped as the next Jack Ma, the well-known Alibaba founder) and also the founder of the Binance exchange Changpeng 'CZ' Zhao. Both have been repeatedly accused of cryptocurrency pumping and holding non-transparent crowdsales. (The BitTorrent Token crowdsale on the Binance Launchpad platform was closed in seconds, to prevent investors from purchasing).

Alongside that, Justin Sun and 'CZ' are the most forthright opponents of Vitalik Buterin and the Ethereum network – claiming that the Binance chain will soon force Ethereum out, and that TRON and the Binance Coin will replace Bitcoin."There is no reason for a project team to issue ERC-20 tokens on Ethereum, because Binance chain is faster and cheaper," Binance CEO Changpeng "CZ" Zhao say on Binance's official website.

Can Binance Chain replace Ethereum in terms of issuing ERC-20 tokens and will it result the end of Vitalik Buterin's era? It is more to be seen as a marketing gag or in other words 'each bird likes his own nest best', experts believe. "We have yet to see the role of Binance chain in the crypto ecosystem, however it is highly unlikely that it would become ERC-20 analogue both from technical and business perspective as each exchange uses its own token and I do not see any reasons for them to use competitive chain," Andriy Velykyy, business development director at Paytomat argues. "Such the statements pump the Binance's token. However on the practice Binance is not the only one exchange for IEOs."

"In the short to medium term there is no smart contract blockchain that is likely to usurp Ethereum, but as far as funding offerings there is no reason – no moat – to protect Ethereum," Dave Hendricks, CEO and co-founder, Vertalo says. He believes, the amount of talent and infrastructure built around Ethereum is impressive but "we are still in the early days and should not count out Binance, Hedera, NEO or any of several others over the longer term."

Kir Kelevra believes that Binance Coin – a very ambiguous cryptocurrency, in essence resembling a Ponzi scheme. "Binance Coin will never replace Bitcoin, as TRON's head Justin Sun can count on. BNB is more like Ethereum in its market behaviour. For example, previously "Fiat people" bought ETH tokens to invest in ICO. Similarly with Binance Coin nowadays: to participate in the Launchpad platform token sale, you need to purchase BNB. While users will no longer participate in IEO and they will have to change tokens back, the rate of cryptocurrency will accordingly start to decline significantly. I strongly disagree with the opinion of the head of TRON, Justin Sun, and I consider the BNB token to be the largest and most beautiful scam in the history of the crypto-industry, not counting of course Bitcoin Cash. In my humble opinion hype with IEO will end soon, because specific crypto-exchange tokens will sooner or later be recognised as securities and trading platforms will have to respond to the fullest extent of the law."

However, while the market is putting everything in its place, anyone investing in IEO token sales on IEO platforms should exercise the greatest caution. "IEOs are typically non-equity, fast liquidity fundraise schemes that may provide the liquidity and volatility that we saw with ICOs," Dave Hendricks, CEO and co-founder, Vertalo, explains. He advises to look at each IEO to separate out the good projects. "There is potential for abuse wherever you have projects raising easy money with no history to back up their claims for future success. However, we will probably see some real projects launch this way that couldn't find capital from otherwise constrained markets." ◆**TFT**

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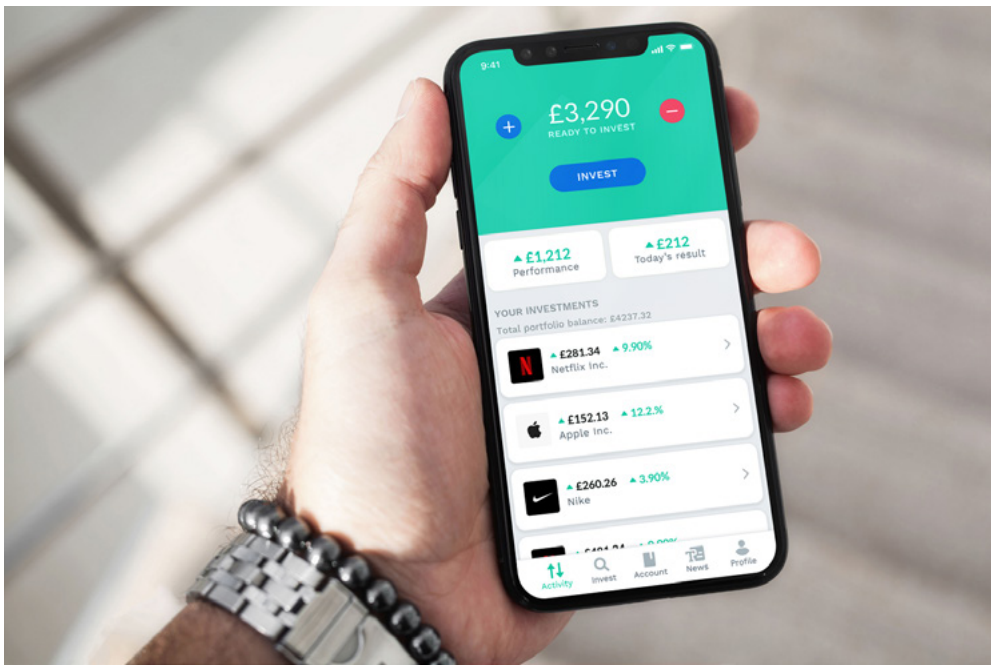
EVARVEST: WIDENING THE SCOPE OF GLOBAL INVESTMENT

"In an era of so much technology and technological advancements, it's time to make investing as simple as having a smartphone and a good WiFi connection – the way it should be," says **STEPHANIE BRENNAN**, *one of very few female leaders in the global fintech industry*



Evarvest app

TFT: How did you get into fintech?

Stephanie: My professional career has always been somehow related to the financial and investment services industry. And it wasn't a coincidence. Being an investment enthusiast I've always found these two sectors particularly interesting and important. Working as a CEO of a company specialising in financial services & real estate in Australia, I've noticed that the finance industry can't keep up with the next generation of investors the way that tech companies like Facebook, Uber and Spotify can – both in terms of convenience and cost-efficiency. It was then that I realised the financial world needs a modern investment solution, one that will be easy to use, quick and inexpensive. Although in today's world 93% of stock market value is divided between three continents, America, Europe and Asia, the access to these markets is limited and the cost is high. As a result, many people don't even think about investing as a way to build their wealth and save for long-term goals, like retirement. My goal was to change this attitude by providing the market with an easy and efficient solution uniting the world's stock exchanges and making them accessible to investors across the globe. That's how the idea of Evarvest was born and why I decided to start my fintech adventure.

TFT: So what is exactly the solution that you'll offer?

Stephanie: In the second half of this year we will launch a unique stock trading app, which will provide an easy to use, transparent and low cost way to access stocks, bonds and ETFs in over 30 stock markets around the world. In other words: our app will make it possible to invest in some of the world's most recognisable brands with just two clicks on a mobile, and with little to no cost.

TFT: But there are already a number of trading apps offering various international trade capabilities. What distinguishes you from your competitors?

Stephanie: There are three main features differentiating our application from the solutions provided by our competitors. The first one, is access to over 30 stock markets all over the world. At Evarvest we think that people deserve a choice to select the markets they want to invest in. There are a lot of world famous brands listed in the USA, like Nike, the company behind our favourite running shoes or Apple, the visionaries behind the phone we use the latest tech apps on, but, there are also brands that we know and love in our home towns too, so why not enable people to invest also in them? The second thing distinguishing us from our competitors is the user experience of Evarvest's application. Unlike the majority of traditional trading apps, our Spotify-style trading solution has a functional and user-friendly interface, easy picking stock playlists and a number of elements for community engagement enhancing the social aspect of investing. Our users will be able to create and share their own portfolios as well as follow the portfolios of their friends and Evarvest's top performing investors. Last but not least – the third feature of our Evarvest app will be a strong focus on education. Believing that the first step to building wealth is knowing how to, we want to support wise investment decisions by promoting financial literacy. That is why we created our Educational Library. Our goal has been to focus on a wide range of useful, and more importantly, practical insights into investing.

TFT: You said that Evarvest would be offering an easy to use, safe and low cost way to access stocks, bonds and ETFs in over 30 stocks markets around the world. It sounds very nice and attractive, but, given the current fees for foreign stock trades, how would you manage to secure it?

Stephanie: Yes, that's true – given that our goal is to make investing accessible for everyone, we do our best to keep all the fees to a minimum. How is it possible? Well, it's the scale effect. We are working with trustworthy and licensed partners providing us with direct access to a wide range of financial markets all over the world, and due to the scale of our operation we are able to offer our users far lower costs combined with no minimum account balances. At this stage, we're happy to confirm that we will be offering commission free stock trading for all stocks listed on the US Market, which is the largest in the world. And when it comes to stock exchanges outside the US, we will place a small margin on the brokerage costs we pay to access them. I can however assure you that it will be much lower than the fees offered by traditional brokerages. As an example, the average commission paid with a UK stock broker to access the London Stock Exchange would be about GBP 10 per stock. Our commission is much smaller, it's 0.1% of the trade, so on a GBP 100 trade, it amounts to 10 pence. As we scale, we've already discussed volume discounts with our partners, this means the more people that use our trading app, the more we can negotiate. So, our aim is to reduce these costs even further so that investors can access other stock markets affordably and not have their investment returns diluted by high fees.

TFT: When will Evarvest app be rolled out? And in which countries it will be available?

Stephanie: We plan to release our app in the second half of 2019 once we receive our FCA approval in the UK, under which we can use the 'passporting rights' to expand into further European countries. Of course, preparing ourselves to secure a smooth European launch of our app in case of a Brexit scenario, we are also simultaneously applying to obtain the Financial Brokerage Licence issued by the Bank of Lithuania and regulated under the European Central Bank. As for the countries, we'll initially be launching the Evarvest app in the UK, Poland, Lithuania, Spain and Portugal before expanding across the entire EU and the rest of the world. Our plan is to gain the applicable licenses in different jurisdictions so we can make our Evarvest app accessible to investors across the globe within the next few years.

TFT: What's next? What are your further business plans?

Stephanie: Right now we are focussed on the development of our app, and I must say it is a very complex process everything from product design and user experience, to designing the operational architecture that supports seamless cross-border investing. Once we launch our app in the second half of this year, we plan to continue our global expansion and increase our Educational Library. The next phase of our development is to expand our product portfolio into further financial products, such as a modern pension fund and retirement savings for the next generation of investors.

TFT: If you had to give a piece of advice to someone starting a startup what would it be?

Stephanie: If I had to advise someone starting a startup I would say: first do your best to understand your end goal and the kind of company you want to be as it will define the decisions you make, and second: make sure that you're supported by the right people, who share your idea and vision.

◆TFT

Stephanie Brennan

OCCUPATION

CEO of Evarvest

BIRTHPLACE

Sydney, Australia

BOOKS

I've read some incredible books but my recent favourite is Shoe Dog by Phil Knight, the founder of Nike.

FILMS

Life Is Beautiful – it's about WWII and is a true story. It's one of the best movies I've watched and highlights the courage and strength a father shows for his son.

RESTAURANTS

Can I only choose one? Attica in Melbourne, Australia has been one of the highlights. It's a 'once in a lifetime' type of place and it was unique, showcasing traditional Australian ingredients and having one of their courses served outside by the fire, listening to rock music and having home brewed ginger beer.

HOBBIES

Walking the streets exploring.

BUSINESS PHILOSOPHY

The right people make all the difference, so does unwavering vision.

Can Blockchains Teach Fish to Ride Bicycles?

For many businesses, blockchain tech's like a fish with a bicycle. No-one's quite sure why they've got it or what they intend to do with it. Here, we try to unpick this conundrum with the help of **MATTHEW C. LE MERLE,** *the co-author of "Blockchain Competitive Advantage."*

In Chapter 2, you mention the need to establish "unalterable identities" on the blockchain. To what extent would this lead to a "garbage in, garbage out" problem for digital verification given the archaic nature of state-issued identities?

We need a new approach to giving people identities that takes into account the new technologies that we have to work with. If we combine blockchain, distributed ledgers, enhanced cybersecurity approaches, DNA identification and ongoing attestations I believe we can greatly tidy up the mess we currently are living with. Governments manufacture our identities and are responsible for ensuring their citizens have the benefits of clear and immutable identities. Governments need to move quickly on this issue to solve the current negative externalities that all their citizens are suffering (ie Identity theft and fraud).

Can tokenisation using blockchain tech really bring about "true transparency with instant execution" as Jamie Finn claims in the book? If so, when?

We can already do instant compliance and reporting by tokenising assets and having them available for pinging at any time. Instant execution is possible when every player in the transaction is technology enabled and the trades are occurring in a fully automated way - although it will be a long time before all players are enabled this way across all asset classes. However, instant execution assumes we want to move to T0. There is an argument that we would do better to stop at T2 settlement since that still allows some time for fraud and error detection to take place.

Do you consider the diffuse development and application of blockchain tech (both geographical and technical) to be positive? Or is blockchain "trying to be all things to all men"?

Without question people are trying to deploy a new technology and innovation (blockchain and distributed ledgers) to every conceivable potential use case and unresolved user need, met and unmet. That makes no sense. But until we know where we can truly advance the state of the art, there is no harm for entrepreneurs and early investors to pursue the perimeter of innovation other than to themselves - they will just fail a lot.

What's the one piece of advice that you would give to a company considering the use of blockchain technology?

If a start up, make sure you have a clear way to play, understand and can secure the key success factors that turn this into a right to win, secure the best investors as your backers and then execute with precision and at speed. For established companies, make sure you are keeping the best of company and that both your own teams and the external teams you are working with are the best you can find. The world is full of ways to burn up time and resources, and the best innovators tend to band together to avoid as much of that friction and wasted effort as possible.

Similarly, what advice would you give to an investor attempting to navigate the murky waters of blockchain innovation and find a project worth backing?

Make sure you know the best practices of investing in early stage startups and don't deviate from those best practices this time around - gain access to the inner circle opportunities, coinvest with the best investors and diversify broadly since this is still an area of leading edge technology with high failure rates - it is a hit driven business.

In Chapter 15, you talk about how you expect most large companies to adopt private blockchain solutions. How compatible do you think these "walled gardens" are with Satoshi Nakamoto's original vision for a completely decentralised system?

Here I think we will see a migration towards open and decentralised just as we did with the internet. Large companies begin by limiting their perceived risk by starting in controlled private environments (think intranets) and then only when the greater network effects and innovation of the open decentralised solutions become proven do they migrate from private to public (they are all in, or going to the cloud and the internet for even mission critical solutions). This is how I think things will play out for blockchain too. In addition, I fully expect most major fiat currencies to have digital crypto versions before too long (cryptodollar, cryptoRMB, cryptoeuro etc.) which will appear to be compelling to large established players for conducting their digital world transactions. ◆**TFT**

LORD HOLMES CHAMPIONS SECURITY TOKENS AT BLOCKPASS SEMINAR

MATTHEW DOVE, Senior Editor

For well over a year now we've been told that the smouldering ashes of the initial coin offering craze would yield a tokenised phoenix; the much-vaunted but little seen STO (security token offering). So, what's the hold up?

Lord Chris Holmes is proving something of a blockchain champion in parliament and has been singing the praises of everything DLT since 2015. His appearance at the Blockpass Security Token Seminar in London was, therefore, met with hushed anticipation. After all, insiders having been telling TFT for months that a lack of regulatory clarity is the main fetter to the development of this fledgling technology.

Those hoping for the inside track on developments in Westminster were to be disappointed though as Holmes' insights were more personal than policy. Nonetheless, the keynote proved to be a spirited defence of the nascent token economy.

Before getting down to brass tacks, Holmes couldn't resist a (somewhat hackneyed) gag at his boss's expense, recounting a presumably fictional occasion when Theresa May greeted the inmates of HMP Dartmoor with the line, "I'm glad so many of you could make it!"

One suspects the venom directed at the embattled PM says as much about Holmes' exasperation surrounding Brexit as it does his opinion of Mrs May. He was quick to cite that the UK's exit from the European Union has proved to be "the mother and father of all distractions" which has "evaporated" momentum for the examination and legislation of new financial technologies.

The second albatross hanging from the neck of distributed ledger technologies is Bitcoin. According to Holmes, if BTC goes down, it'll take all other DLT innovation with it. Death by association as it were.

With these considerations in mind, Holmes sat down to write his report entitled, DLT for Public Good in November 2017 and he's still eager to see that the tokenised baby doesn't get thrown out with the Bitcoin bath water (or drowned in the Bay of Brexit).

The roadmap suggested by the erstwhile Paralympic gold medalist is three-pronged;

Leadership, Collaboration and Competition

Holmes sees government's role in fintech innovation as that of a thought leader rather than a legislator. Specifically, he wants to see the government lead by example, citing as a use-case the tokenised benefits scheme trialled in the North West before disappearing without a trace. Holmes argues that such schemes not only streamline flabby bureaucrat processes but also engages benefit recipients in the process, turning "passivity into participation."

On the regulation of blockchain technology, Holmes stated that "regulating DLT is like regulating maths". The peer then posited that regulation should apply to applications of tech, not the tech itself. Furthering his laissez faire philosophy, he added that excessive regulation and tinkering with products will lessen the pace of the sector's evolution, asking;

"When is something that's good enough, good enough?"

LORD HOLMES OF RICHMOND

Nor does Holmes wish to see the government trampling all over the open-source crypto anarchist roots of tokenised offerings. Throw into the mix a touch of cross-market collaboration and a healthy pinch of free market competition and you've got yourself a failsafe formula for mass adoption.

The honourable gentleman closed with a call to arms;

"We know what we need to do to make this a success"

Before adding, "Carpe DLT" ◆**TFT**

The Potentials and Pitfalls of Applying AI in the Financial Industry

CHARLEY BROOKE BARNETT
Digital Editor

***ANDREAS BURNER**, CIO of SmartStream Technologies, has over 20 years of experience in building financial service solutions for top international banks. His mission is to establish a culture of innovation within SmartStream. TFT's **Charley Brooke Barnett** spoke to Andreas about the SmartStream Innovation Lab and his team's work with Artificial Intelligence.*

Charley: To what extent can AI influence the banking sector?

Andreas: That's a really good question. My AI expertise comes originally from my research on medical images, where we've successfully used AI and machine learning for quite some time now. In the banking sector, it's quite new to use machine learning and AI, but it's a great place to apply it.

The reason why it is so great for banks is if you look at how much data is processed and stored it's absolutely enormous. By law, banks must keep all data for audit purposes for many years. In that data there is a lot of knowledge, not only the application data but also the counterparties data. Furthermore there are recorded user actions, for example, what is considered to be a regular situation or what is an exception and requires a manual intervention. Also there is data for how a user specifically reacted to a certain exception. And that's great when applying AI to the banking sector as machine learning needs lots of data and it is stored and ready to use because of these audit requirements.

Charley: What are the main risks of AI adoption and how can these be lessened?

Andreas: There are two main risks, I think. Firstly, many big corporates try to apply AI and machine learning on data that is distributed throughout their organisation. Their goal is to consolidate their data and make sense of it. The hope is to better understand the clients and products and then be able to fine tune their offerings. What we see at the moment is that many AI projects are failing, however, it's not so much AI or machine learning that causes the problems. Lots of big projects fail as it's really tough in big corporates to get the data in good quality to one place. I think what we see in the news about machine learning or AI projects failing is based on that. It's really hard to get the data consolidated and reconciled.

In SmartStream, we have a different and very focused approach. Our goal is to incorporate AI technology very specifically into our products. By doing so, the AI technology we have developed is extracting knowledge from our own application and making sense of data that we already know and possess. There is no need to consolidate data from different locations and therefore it's a much leaner approach that's easier to manage. Our current AI projects work great and the big benefit is that we can offer our clients a good business case by just upgrading their applications to the latest version.

The second risk is that there are many developers that want to go into AI and machine learning technology, but they do not have much experience. There are lots of quick start courses to learn AI, however, mastering AI requires years and it is tough for companies to find skilled people that know where to apply what AI technology. Applying the wrong technology can be very harmful. In SmartStream we feel very lucky that in our Innovation Lab we have highly skilled and experienced people to work on this subject.

Also, there is this ongoing discussion about interpretability, as many AI methods are like a black box. They will give results but they do not provide reasoning and why they came up with that response. In banking, that's dangerous. You can't just have AIs making decisions without explanation. Developers need to be extra careful in applying the right technology to the right problem. There is a high demand of good developers and the market of competent and skilled people is very small.

Charley: Do your clients embrace or resist AI?

Andreas: Interestingly, that's a bit like the cloud discussions in the beginning, where banks argued that they will not use cloud applications because their data is then outside of their control. In the meanwhile, that has changed and almost every bank is using cloud infrastructure because it is now understood that it is making things easier, better and faster. Also SmartStream's cloud offering is being used more now than ever before. It proves that if there is a business case and if the technology is used in the right way, it will find acceptance.

At the moment it's the same with AI and machine learning. A few years ago, everyone argued that we cannot let AI make decisions in the financial industry, it might be too risky. Since then data scientists have proven that applying AI in the right way causes no danger. We are at a point now where banks understand AI has a huge business potential. It typically allows quicker response times than ever before, can predict data, can increase the quality and gives a better understanding of workflows, data, and customers. Banks are profit oriented and they are continuously looking for potential business cases, and there are a lot when applying AI. We see plenty of interest in our innovation projects and if we can give our customers the confidence that we apply AI and machine learning in the right way and showcase how it is useful for them, then they will adopt our innovations.

Charley: What tangible benefits will AI bring to your clients?

Andreas: SmartStream has a very nice and lean approach for delivering innovations to our customers. Currently, more than 2,000 financial institutions are using our software products and the main question we have been asking ourselves is how can we bring the benefits of AI to all of our customers? The strategy we chose is to prototype our innovations with a small number of clients and if these projects are successful, we integrate the newly developed technology into our existing products so that a wide range of clients can benefit from it. By now we have done several AI prototypes that performed very well, and the projects have been very successful. We are working right now to incorporate these technologies into our products. Later this year SmartStream will release new versions of several products and our clients can simply upgrade their installations and then can use machine learning and AI technology out of the box. For our reconciliation solutions, for example, this means that our clients will see a boost of their matching rates as the integrated AI is continuously optimising the matching logic to compute better results.

Charley: What are SmartStream investing in right now?

Andreas: Our biggest investment at the moment is SmartStream's Innovation Lab in Vienna where our researchers have the freedom to rethink how our products can be used in daily business and then try to inject modern technology at the right points. Using clever technology in the background has severe consequences for the whole design of an application. For example, a user interface for an AI powered application has to be designed in a smart way that it hides the underlying complexity from the user and only shows useful information. During the last year SmartStream has been working on AI, machine learning and blockchain and its related technologies. We are now at the stage where we see that our ideas are working and we get very positive feedback from our customers who have been developing and testing our prototypes.

At the moment we're busily integrating the successful prototypes into our standard products and later this year we'll be announcing the new product features and releasing this fantastic technology so that all our customers can benefit from it. ◆**TFT**

ANDREAS BURNER
CIO of SmartStream Technologies

How to Deliver Better Customer Experiences

Why is it that organisations increasingly find the whole process of replacing existing digital banking engagement platforms as more of a chore to endure?

There was a time when delivering the next version was seen as an exciting experience for everyone. Organisations couldn't wait to get on with the show. The chance to be creative, stamp your own mark on the solution and then bask in the success of the delivery was all too irresistible. Now it seems those days of glory are fading fast, replaced with premonitions of anxiety and aversion.

The fact is the whole industry is littered with cautionary tales of woe, strife and stories of disaster when it comes to implementing new digital banking solutions. Why is it increasingly hard to make a success of these projects? To answer this, we first need to recognise the causes of such ill-fated initiatives. These lie in the misconception that bigger is better, lessons from last time will have been learned and that somehow, fortune will favour the bold. The following statements highlight where organisations will typically go wrong in the process:

"We need to involve everyone in the organisation and gather their input."

While it is good to make sure the whole organisation is behind the project, too much input creates the 'too many cooks' scenario. The result is a bloated and mismatched set of requirements that shoot at the moon and are just as impossible to deliver.

"We must make this the best in the market."

Having ambition to create something to be proud of is always a great place to start. Where this goes wrong is translating it to mean you need a complex solution, squeezing in all of the functionality offered by your competitors.

"We have to be leaders of innovation."

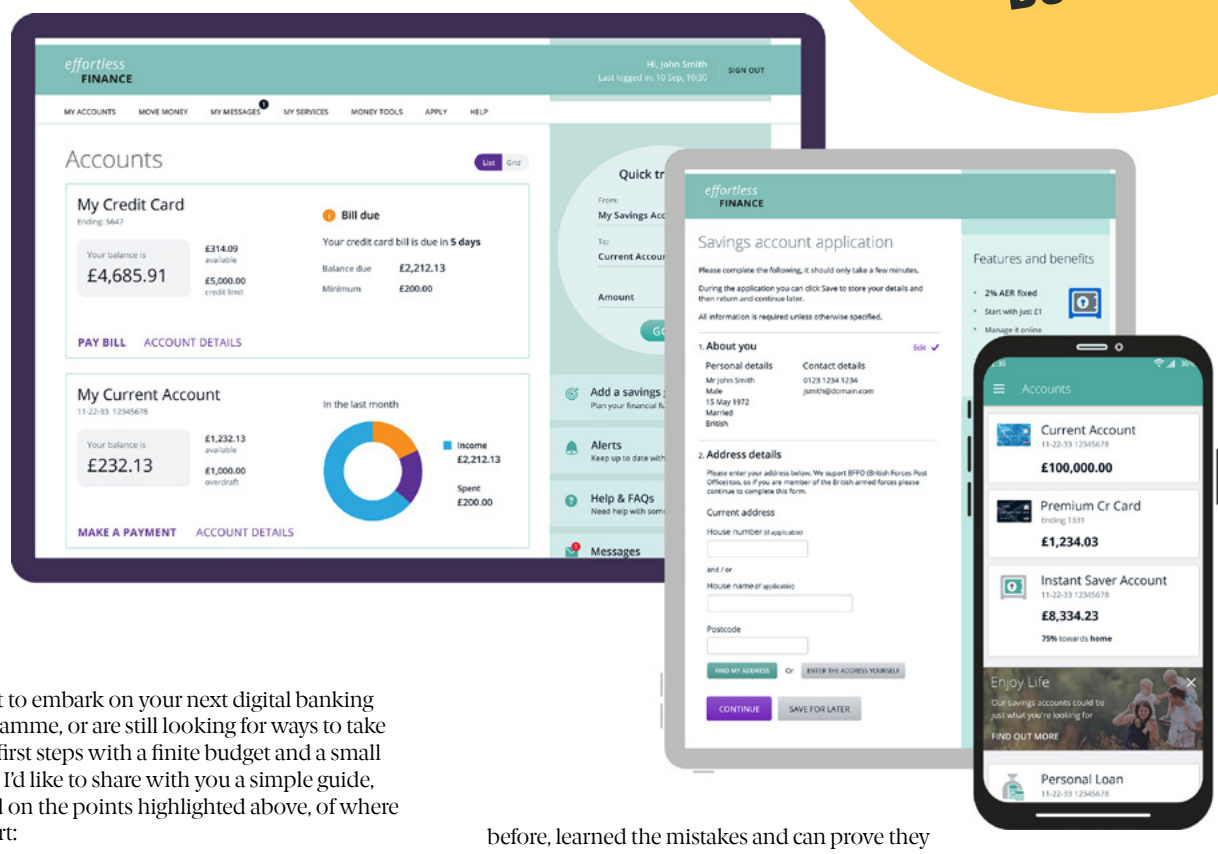
Innovation is one of the most overused words of the 21st century. True innovation cannot simply be plucked out of the air at will. Trying to become a market leader by introducing technology for the sake of it is neither what the business really needs nor what your customers actually want.

"We must cater for all of our customers' needs."

Thinking that you will serve all of your customers all of the time ends up creating a solution that is neither simple to use nor intuitive, which, ironically, is all your customers are really asking you to deliver.

With this in mind, is there any hope of returning to the days of high aspirations and successful projects? Can we unlearn the damaging approach to such projects that have too much scope, too much complexity and are designed by too many cooks?

This year, Money20/20 Europe promises to be one of the most exciting and informative events of the 2019 fintech calendar, drawing CEOs, CIOs and world-class consultants from across the industry, eager to learn and share their experiences. Hot topics include innovation, security, payment transformation and of course digital banking engagement. But with over 2,000 organisations from across 80 countries, there's going to be a mountain of content to consume. If you are about to embark on your next digital banking programme, or are still looking for ways to take your first steps with a finite budget and a small team, I'd like to share with you a simple guide, based on the points highlighted above, of where to start:



1. **Keep it simple.** I don't mean make it basic, but think about what will really make a difference to your customers. When thinking about scope (and the effort you have to spend), think of this 80:20 Rule:
   "If it's complex, 80% of the effort will be spent creating 20% of the scope, while customers will spend 80% of their time using the other 80% of the scope, which only cost 20% of the effort to create!"
   If you've just had to re-read that several times to make sense of it, good! You need to really consider where you should focus your effort and spend your budget wisely.
2. **Your IT teams will say it's all about the technology**, adhering to their prescribed view of architecture and industry best practice. Sure, don't go for something old and out of date, but also don't be led by technology. You need to deliver a fantastic experience for your customers to enjoy. The customer is the archetype of your business model: You exist to service their needs (and make a healthy margin in the process), so take a customer-led, outside-in approach that puts the customer first when determining the scope of your solution.
3. **Building and configuring a digital banking platform is neither simple nor straightforward** for anyone who hasn't done it many times before, learned the mistakes and can prove they are now proficient at it. Unless you are already experts at delivering highly customisable 'Buy and Build' or 'Low Code' projects, it's a much safer bet just to give these a miss.
4. **Avoid projects** that end up taking longer than four months. Many platforms have too many options that are just unnecessary 'sales candy'. If you try to implement one of these with lots of bells and whistles, your scope will be on an almost reckless scale when it comes to trying to achieve a successful timeline within budget. Financial service organisations have a habit of grossly underestimating the scale of the effort and time needed to deliver a successful solution.
5. **Choose vendors who understand** your business model and the needs of your customers, and show that simple, effective, secure and successful implementations are where their expertise lie.
6. **Don't just select which features you think you need.** Create realistic and reliable personas of your key customer segments and use these to construct the best journeys they will need to engage with your products and services. These journeys will then define the right functionality required to fulfil their needs.
7. **Think about what happens when it's all over.** The fact is, it's not actually over at the end of the project. It's the beginning of a journey where you can, with the right team behind you, evolve and grow the success of the platform. Continue to delight your customers with ongoing improvements that keep you on the crest of the wave.

At ieDigital, we believe in taking the outside-in approach, putting customers first and foremost. We have created out-of-the-box digital banking products that are ready to implement in three months, delivering on the promise of a successful project. Our focus is delivering better experiences using effective personas that represent your customers. Our customer success programme keeps improving the customer experience after the platform is live, continuing to deliver ongoing, business-led value.

Real innovation is focusing on the customer first, satisfying their needs and desires. Innovation is delivering solutions that continue to delight your customers and meet your ongoing business needs.

We're here at Money 20/20 Europe, stand M50. Let us help you rediscover the excitement of delivering your next digital banking platform for everyone in your organisation.

◆TFT

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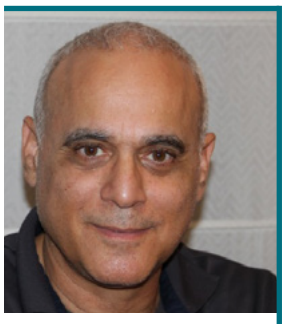
Blockchain's Role Will Be Critical After the Next Financial Crash



NIR YAACOBI
Economic Lead, GoodDollar

Nir Yaacobi, PhD, is the economic lead for GoodDollar, a not-for-profit payment network that explores how decentralised cryptocurrencies and blockchain technology may enable models based on universal basic income (UBI) with the central aim of reducing global wealth inequality

Some commentators have voiced concerns that the lack of tools in central banks' arsenals – interest rates are already very low in many countries – could mean that the trough lasts longer than past crises. Should this play out, it would impact most severely on those without access to a secure local or regional currency.

It's hard to predict the future, but it might be that financial institutions and governments have to change their business models completely. As such, it is not a great leap to reason that within the next five years we might see more countries embracing blockchain-powered projects and cryptoassets as alternative economic system.

To sceptics, this may seem too far fetched to countenance. However, the rapid progress of the blockchain technologies and cryptoassets means that someday there will be a feasible alternative to fiat currencies in a country near you – and one that is properly secured and scalable.

What, then, will happen after the next financial crisis, and how can cryptoassets – and blockchain advancements in particular – improve the situation for everyone?

To achieve robust solutions at scale and speed, those in power should embrace blockchain solutions and those in the tech community ought to collaborate with financial authorities.

Furthermore, the next economic crash is likely to strengthen the case for a global-scale universal basic income (UBI) – the idea of providing regular, unconditional cash payments to citizens to enable a baseline standard of living.

As Thomas Piketty demonstrated in Capital in the Twenty-First Century, published in 2013, as long as the rate of return on capital is greater than the growth rate of the economy, which is the case for most economies most of the time, the rich get richer. That triggers growing inequality in society, and eventually leads to poverty, crime, political instability, reduction of output and more crises. In essence, the way the system works leads to inequality. And when the next financial crisis hits, it is those without a secure local economy would are likely to suffer the most, and for the longest amount of time.

Now, we have the technology at our fingertips to help. Some, like us at the GoodDollar project, believe that a UBI solution may be found without the backing of centralised systems, while others are taking a classic UBI approach engaging with authorities in charge of the redistribution of funds.

Blockchain solutions could transform the global economy

By building solutions that create better wealth distribution then, potentially, inequality across the globe can be improved. By making the world more equal then more people can participate in the economy.

The issue of wealth inequality has been at the forefront of the mind of Yoni Assia, the Co-Founder and Chief Executive of the global multi-asset investment platform eToro, for most of his adult life. "It is a critical economic challenge of our time," he wrote in November when announcing the GoodDollar experiment at Web Summit 2018. "I've long felt a solution is conceivable when all the elements are aligned. I first wrote about this idea in 2008, in an article entitled The Visible Hand. The original concept has significantly evolved since then."

GoodDollar is a not-for-profit project that intends to launch a payment network, and explores how decentralised cryptocurrencies and blockchain technology may enable models based on UBI. Our central aim is to reduce global wealth inequality.

We are looking to launch a peer-to-peer money transfer network and a digital wallet to access it. The goal is this: once GoodDollar is fully functioning, every day, any person – wherever they live in the world – will be handed an equal portion of the redistributed funds from the GoodDollar network.

My GoodDollar colleagues and I believe this represents a more just economic model, and would encourage everyone in the world to make payment transactions on the GoodDollar network, instead of their local one – especially if they believe financial inequality should be fixed for good.

We are well aware that delivering decentralised UBI on a large scale requires much input from the whole ecosystem, and beyond – we cannot do this alone. We welcome partnership and collaboration and are keen to learn from other blockchain-backed projects in this exciting space.

Many progressive minds are adding their voices to the cause

Sam Altman, the President of the start-up accelerator Y Combinator, has been interested in UBI for a long time, and in late February he announced that he is to pursue a large pilot study. On Conversations with Tyler – a podcast hosted by economist Tyler Cowen – Sam discussed the importance of "providing fair financial infrastructure for poor people".

Additionally, he suggested that cryptoassets, in some form, could provide the foundation for a global UBI. "I can imagine a crypto system where you see something that is more powerful than any government on Earth, where you actually figure out a way to give every person on Earth a coin, and then you make this gigantic network that everyone believes in, and you can do redistribution outside the control of any government," he said.

With the convergence of tech trends, a blockchain-backed project that adopts UBI principles – and collaborates and works alongside governments, crucially – could be achievable before long.

Sam was talking about something I have believed for a good while: a new economic order is inevitable. In 2019, owing to network limitations and security challenges, a decentralised digital currency cannot yet scale the globe.

While crypto-based UBI might seem implausible just now, I echo Sam's belief that it will eventually happen. "That would be the most powerful network effect the world has ever seen economically, and I think that would be cool," he said on the podcast. I think that it would be cool, too, and that's why the exploratory work GoodDollar – and other blockchain-based UBI projects we want to collaborate with – is doing is so critical.

◆TFT

What's Next in the Automation First Era?

MARIE MYERS *is the CFO of UiPath, the fastest-growing and leading provider of Robotic Process Automation (RPA) and AI software worldwide. She provides financial leadership that supports the company's global mission to accelerate the adoption of automation across public and private sectors and businesses of all sizes. TFT's* **CHARLEY BROOKE BARNETT** *joined Marie to discuss RPA and its impact.*

Charley: How would you describe RPA to someone who has never heard of it before?

Marie: I would describe it as software robots that mimic human actions. It's software that you actually code very simply to mimic tasks you would perform either in a process or part of the responsibilities of your daily job. Don't think about it like a classic robot, think about it like autonomous driving. It's in the same vernacular as autonomous processing.

Charley: Within the finance sector, where do you think the most impact will be made by RPA in the near future?

Marie: This space has really been led through finance. It is one of the most frequent entry points for RPA, and the reason for that is the high degree of fragmentation, across everything from basic transactional processing all the way through to regulatory filings. Finance relies very much on the enterprise architecture of a company, which is in some cases decaying or getting old. It's carried much of that burden because it's had to keep up with a lot of regulatory changes, and in many cases, compliance has been dealt with manually. Finance has been one space where there hasn't been a whole lot of transformation taking place, but there's been plenty of regulatory and compliance pressure in the last two decades. The way that companies and banks have dealt with that is through people, who have picked up mundane work to overcompensate the process, with no automation. In the enterprise, what you find is that finance is often the entry point, and RPA can make its way in through finance functions.

MARIE MYERS
CFO of UiPath

Charley: How does RPA drive growth and transformation? What are the best use-cases you have seen in banking and finance?

Marie: If you look at what is at the top of the agenda for most CFOs right now, it's: How do I bring costs down, and how do I enable the digital technologies that I'm living with? This is where RPA becomes an incredible sweet spot, because it gives you the opportunity to become a lot more efficient. At the same time, it gives you a chance to become the glue in your enterprise architecture. If you're out there today and you have to make really large investments, RPA is an investment which is usually 20-30% the cost of an employee. It's low-risk, high return and quick to implement. It's very cost-effective and delivers incredible results.

In finance, the areas where RPA has got its stronghold is in the transactional world. If you recall, over the last 20 years, the BPO sector is where a lot of labour moved offshore to do shared service functions. If you think about it, they were mostly highly educated people doing lots of manual three-way matching, invoice and validation. That work is highly repetitive, so robotics found its way into that area easily. I used to be the controller for HP, where I led our transformation in robotics, building several hundred software robots over the last few years. The transaction space was an obvious place to start, around cash application and accounts payable. They are the easy ones to automate.

The banking sectors have had a lot of compliance and regulatory pressure over the last 10 or so years. You think about credit applications: people fill out their application, then a bank has to go through and actually reconcile that data in order to process the application. That process has been handled very manually. A robot can go in, pick up and cross-reference the data. So, credit applications are one area for RPA.

Another one that is becoming very popular is in fraud detection. With pressure from the internet and cybersecurity, there's a lot more focus in the banking space around fraud. Typically, it's been cross-referencing again, so manual checks of data, people and bank account numbers. That's where a robot is coming in as an enabler of fraud detection. Much of the filings are still done by people, so it's another area that bots can transform. You can have error-free transactions, which is a tremendous financial gain. Another thing is the speed of the process, particularly the cash application process I managed and drove to be 6x faster.

There is an enormous connection between robotics and humans. Human minds can be utilised in the way they were designed, taking away manual and mundane work. The industrial revolution brought a lot of this to the table, where people moved to cities and started working in factories, which became large companies. Much of the work is routine (and a bit boring!)

Charley: What are the main risks of RPA adoption? How can these be mitigated?

Marie: The first one is the risk of getting it wrong the first time. I see that happen quite a lot with companies who start out and either try to automate a very difficult process or automate a process that is poorly implemented. Things like that can go wrong upfront and my advice, is first of all, start small with some areas where you'll get some quick wins, to build up momentum. Secondly, really understand and document the process so it's representative of your workflow. The last thing you want to do is put garbage in and get garbage out. If you automate a bad process, you'll end up with a robot that won't work very effectively. The same thing with a human: if you have a process that is being done differently between two different people, and you implement a bot that does it two different ways, it's not going to be effective. That's one of the biggest risks; I call these areas 'opportunities for failure of implementation'.

The other one is that people underestimate the impact on people. Folks don't fully appreciate that when you introduce robots into the workforce, it has a huge human impact. You really need to think about the cultural aspects of robotics process implementation and how you're going to drive that cultural and digital transformation of your workforce. It doesn't come naturally to understand how you work robots. It's my aim for the year to write a book on the whole cultural side of robotic implementation.

Charley: What are the biggest concerns for your clients when it comes to not only Brexit, but also modernising?

Marie: Automation is a great opportunity for them, irrespective of what happens with Brexit, to streamline operations and make businesses more efficient. Making sure you've got sound operating efficiency in place is very prudent in this kind of environment. Jumping on the automation bandwagon would be my advice right now. In terms of modernising, people are struggling on how to get started. A lot of the conversations I have with customers focus around 'Where do I start this?' They're wondering what part of the organisation to start in, and how to staff it. This is what can sometimes stall people. The other thing is that people may not have the skills in the workforce to be prepared to manage robotics process automation. Today, you need to be digitally literate. It's so important; you cannot afford to have a workforce that doesn't understand technology. There still are some big gaps out there in certain enterprises, where it's a whole education process.

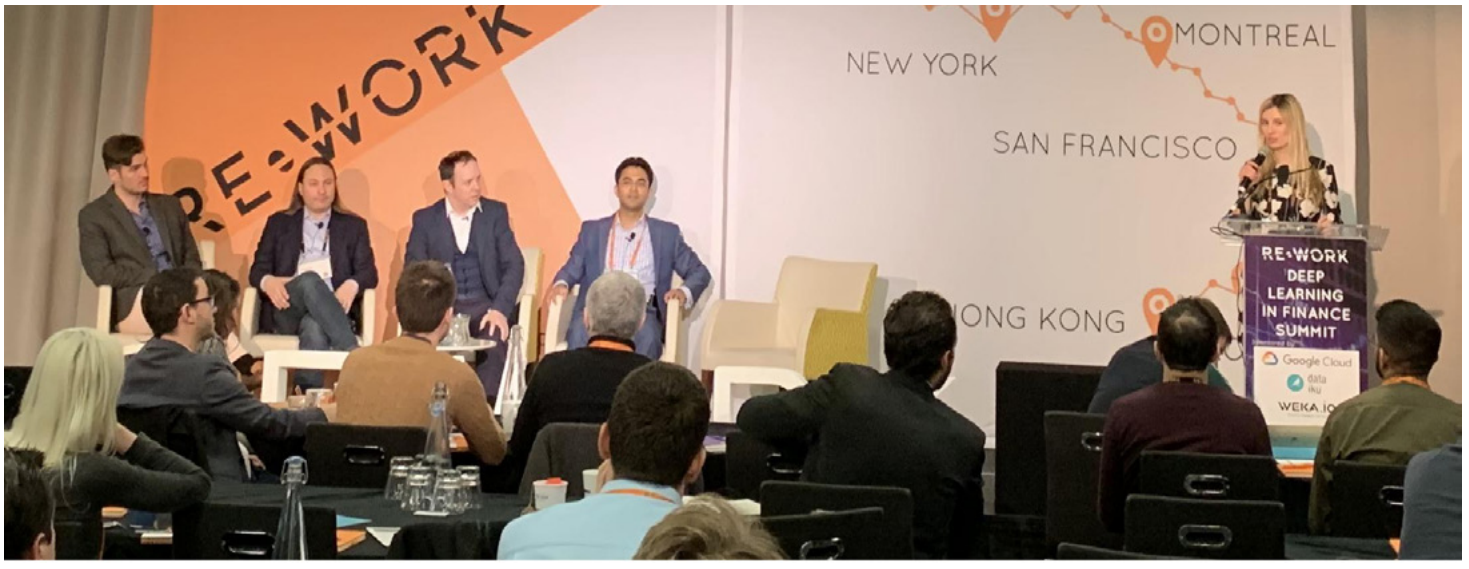
Charley: How do you see the regulatory climate changing in the UK in light of RPA developments?

Marie: I think RPA can be a huge enabler for companies to deal with the complexities of regulation. We've seen the world of privacy really change, with GDPR and other countries following suit. I think robotics can help companies to become more compliant. My background is in compliance, where I spent the early years of my career. When I got into automation, I was one of the earliest adopters on the planet of enterprise RPA. I focused in on controls and governance, as I realised that robots themselves are a whole transition in your workforce and workflow. It's a huge opportunity to improve the controls. Often in business, a lot of these break down because humans make mistakes. With robots, you can improve your controls environment. Depending on how the regulatory environment plays out around the world, having a robotics and automation strategy for a company is really prudent. It will prepare you to deal with the increased regulation you're probably going to be faced with. ◆**TFT**

DEEP LEARNING TO MAKE DEEP INROADS IN THE FIGHT AGAINST FRAUD

On March 19, TFT CEO **KATIA LANG** *was invited to attend Re-Work's Deep Learning in Finance Summit where she chaired a discussion entitled; Utilising AI to Assist Security Efforts & Enhance Safety in Finance. The panel covered the opportunities and limitations of using artificial intelligence (AI) to combat financial crime.*

CHARLEY BROOKE BARNETT
Digital Editor



Enter four industry experts: Mason Edwards (Customer Engineer, Google Cloud), Adam McMurchie (Head of DevOps, Barclays), Adri Purkayastha (Head of Technology & Cyber Risk Analytics, BNP Paribas Group) and Lorenzo Cavallaro (Professor, King's College London).

The benefits of AI have been well documented. Its ability to learn from vast quantities of data and flag potential threats in real time, is undoubtedly an asset. Darktrace, the cyber security specialist, even likens its AI algorithms to the human immune system, with its unique ability to detect and eliminate threats.

With cyber attacks becoming increasingly prevalent and sophisticated, Edwards was keen to emphasise the importance of staying ahead of the threat:

"You need to be able to add new data to your systems, retrain and deploy new models to stay ahead of your opponent."

It's easy to see how this works for a flexible challenger, but harder to imagine legacies being so agile. McMurchie weighed in:

"It's not just about how strong the model is, it has to be at least better than the traditional models we've been using for 30 years."

The big banks have huge customer bases and therefore plenty at stake if AI is haphazardly implemented.

Katia Lang then asked the panel to comment on the role supervised learning has to play when safeguarding data. Purkayastha was quick to interject:

"Traditionally with fraud detection, we like to imagine bad actors, but the problem is actually an imbalanced classification issue."

According to the 2018 Cyber Security Breaches Survey, 43 per cent of businesses in the UK reported cyber security breaches or attacks. This is an alarming and costly statistic, not only for the business but the consumer too. The survey found that breaches were more often identified among the organisations that hold personal data. With this in mind, how do organisations manage their data without it becoming compromised?

Edwards is in favour of embracing inevitable obstacles, with the end goal of finding out what's useful and what's not.

"The first step to every machine learning AI project is getting your data house in order, looking at the problem, scoping it down and building on your success."

Playing Devil's Advocate, Cavallaro warned of the dangers of buying into the hype of deep learning, as it's not necessarily applicable to every problem you're trying to solve. He pointed out:

"It doesn't always work as well as traditional machine learning approaches, it's important to understand data limitations."

What happens when data falls into the wrong hands? If both businesses and fraudsters have machine learning and AI at their disposal, who comes out on top?

McMurchie was first off the mark:

"It really starts with education. Banks cannot build their entire AI strategy themselves."

He called on industry collaboration and addressing "archaic and out-dated mind-sets."

It's no good then, to have a strategy without a well informed partnership.

"The issue is not around collection of data, it's around governance of data. Can this database talk to this database legally and do we know the impact from a regulation standpoint?", McMurchie continued.

The Head of DevOps at Barclays then suggested the industry focus on niche data, which is easier to categorise and classify. "If you can generate that data with your customer base, you'll have a great advantage."

It appears then that the sector is moving ever-closer, increment by increment, to defeating the savvy fraudsters in this game of digital cat and mouse. ◆**TFT**

Addressing the Gender Issue and Securing the Future of Fintech

TheCityUK and Santander explore the talent gap present in financial services in their March report 'Fuelling Fintech' and suggest potential steps for the industry over the next five to ten years.

CHARLEY BROOKE BARNETT
Digital Editor

The report was released alongside a panel discussion chaired by Marcus Scott (Chief Operating Officer, TheCityUK) and featuring Anne Murphy (Managing Partner, Odgers Berndtson), Professor Phil Sutton (Imperial College London), Mark Hoban (Chair Skills Taskforce) and Josh Bottomley (Global Head of Digital, HSBC).

The breakdown of stats is eye-opening. The fintech market is worth £7 billion to the UK economy, employs 60,000 people and had a year-on-year investment growth of 154% in 2017. The UK is also the leading exporter of financial services across the world, with more banks' head offices being located in London than any other city. Given this, fuelling fintech is a tremendous responsibility.

A tug of war has emerged between finance and tech firms over who can attract the best recruits. How do you bring in top talent to finance, when you're competing with the likes of Google, with their slides, massage rooms and sleep pods?

Murphy believes the financial industry "Suffers from a brand issue." Having asked graduates for their perception of a life in finance, many expressed concerns over the limited roles available. She observed that the industry is not doing enough to promote the rewarding aspects. A critical failing at a time when people (mostly millennials) are sacrificing pay cheques for purposeful careers which adhere to their values.

IWG recently conducted a survey which found that 80% of Brits prioritise flexible-working jobs. Barclays are making strides with their 'Dynamic Working Programme', where 57% of the firm's global employees embrace flexi working. Encouraging such trusting workplace cultures could aid recruitment (and bolster five star Glassdoor reviews!)

The report underlines how financial services organisations are increasingly recruiting within the remit of coding and software development, user experience, product design, data science and cyber. Highly specialised job roles such as 'Data Scientist' and 'Technology Specialist' are now in demand, however many applicants lack the know-how to secure them. Financial organisations have to look further afield to fill these roles and dive into a broader talent pool. In other words, not just recruiting graduates with finance degrees.

With this in mind, diversity is imperative. Diverse workforces bring cross-functional skills, with research showing it leads to higher financial returns. However, the gender imbalance in fintech is still woefully apparent. In a breakdown of AI talent pool courses in 2016/17, 22.5% of undergraduates were female. Jaguar Land Rover created its Women in Engineering initiative after finding that in 2013, only 1,234 female students graduated from appropriate engineering subjects in the UK.

According to the report, employers are calling on universities to make tech content available on non-tech degrees, as these skills are highly transferable across many different sectors. Introducing fintech graduate placement schemes could also be beneficial. This would help to showcase the opportunities finance can provide and, as Sutton puts it, "Push away the barriers and get young people enthused." This should be done as early as possible, not just at university level. Bottomley agrees "Build curiosity and passion early on...combine what's possible with accountability."

The panel asked for closer ties between the government, academia and the financial industry to ensure best practice. Sutton called for collaboration between universities and business:

"There is value for the sector to engage with universities and build long term relationships to develop trust and joint commitment."

The focus should be on neutral support and not treating universities "Like a contract supplier."

The University of London is leading the way with its degree in creative computing. Manchester University also boasts an AI degree, including programming and algorithms on its curriculum. With UK recruiters seeing a 51% increase in AI hires, these courses could be the ticket to fast track graduates through the recruitment rounds.

It's worth addressing the potential impact of Brexit on recruitment too. The report found that since the Brexit vote in 2016, there's been a dramatic fall in the number of graduates coming to the UK from France and Germany in particular. A LinkedIn study, which surveyed 600 hiring and recruitment managers in the UK, found that up to 20% of graduates with the necessary tech skills in the sector are from the EU. That's a big slice of the tech talent cake that's now out of the UK's reach.

Senior management have a responsibility to install a digital culture to ensure their workforce and recruitment programmes are keeping pace. Hoban encouraged in-house programmes to raise awareness to make the new skills learned applicable to real-world business. A 2017 survey from Deloitte discovered that only 16% of executives believe their employees have the digital skills necessary to execute their strategy. To bridge the gap in knowledge, many firms are now developing partnerships with initiatives such as the School of Coding, to enhance tech literacy across the board.

The UK is undoubtedly at the forefront of the fintech ecosystem, sporting remarkable growth and promise. Looking ahead, the industry requires its workforce to be digitally aware, flexible and diverse in order to flourish. Young students (at both school and university level) must also be guided to develop their tech skills, thus nurturing the fintech talent pool now and in the years to come. ◆**TFT**

Wells Fargo Gets Backing For OpenFin, Gets Bashed by Warren

MATTHEW DOVE, Senior Editor

Image Credit: DonkeyHotey

Wells Fargo have had quite a month. First the triumphant announcement that they'd helped secure $17 million in Series C from major banks and leading fintech investors for OpenFin, a financial operating system. Then, another unceremonious shellacking from their number one fan Elizabeth Warren in the Senate.

The funding round was led by Wells Fargo with participation from Barclays and existing investors including Bain Capital Ventures, J.P. Morgan and Pivot Investment Partners. The Series C round brings OpenFin's total amount of venture funding to $40 million. Proceeds from the financing will be used to make OpenFin OS ubiquitous on financial desktops and to fund further product innovation.

"Apple and Google's mobile operating systems and app stores have enabled more than a million apps that have fundamentally changed how we live," said Mazy Dar, CEO and Co-Founder of OpenFin. "OpenFin OS and our new app store services enable the next generation of desktop apps that are transforming how we work in financial services."

OpenFin OS has become a de facto market standard for deployment and interoperability of desktop apps to power digital transformation across the industry. Its customers include most major banks, leading asset management firms and many of the best known vendor platforms in the space. However, its new-found association with Wells will raise at least a few eyebrows.

Whilst the good times roll for Barclays, OpenFin and Wells Fargo, senators like Warren are keen to make sure the public gets both sides of the story. During a Senate Banking Committee hearing in 2017, Warren implied that former Wells CEO Timothy Sloan was either incompetent or complicit in a 2016 fake account scandal and should be fired. He later left the bank under a cloud of suspicion and a chorus of cheers, Warren herself tweeting at the time;

Elizabeth Warren's tweet

The U.S. Federal Reserve have since imposed a growth cap on Wells Fargo following the exposure of widespread vagaries in the sales practices of multiple divisions of the bank. The "scam" Warren alluded to in her Tweet involved millions of fake accounts being opened without customers' knowledge.

The latest duel between Warren and Wells centred on Joseph Otting's refusal to publicly reveal the Office of the Comptroller of the Currency's (OCC) evaluation of the next Wells Fargo CEO. The episode leaves unanswered questions regarding corporate transparency and accountability as well as the willingness of government officials to address them.

TFT asked OpenFin how important transparency and accountability are when dealing with its investors and partner banks. No response there came... ◆**TFT**

DIVERSITY-FOCUSSED RECRUITER CHOSEN TO FIND THE NEXT GOVERNOR OF THE BANK OF ENGLAND

Sapphire Partners, an executive recruiter which champions diversity, has been selected to aid in the search for Mark Carney's replacement as Governor of the Bank of England.

CHARLEY BROOKE BARNETT
Digital Editor

Since it was established in 1694, the UK's central bank has appointed 120 governors, each and every one a white man. The inclusion of Sapphire Partners in the hunt for the 121st can therefore be viewed as a seachange at one of the nation's oldest and most illustrious institutions. The headhunter's leadership is comprised entirely of female partners as is its advisory board (barring the presumably token hire of Bruce Rical!), which features notables like Cherie Booth and Pinky Lilani.

Candidates in the running for the position range from Steady Eddies like Andrew Bailey of the FCA to more left-field picks like LSE Director Dame Minouche Shafik. The BoE could even follow the American model by handing the keys to the kingdom to a Goldman Sachs lifer like Ben Broadbent.

With the BoE aiming for 35% of senior roles to be filled by women by 2020, TFT asked fintech advocates Ghela Boskovich and Louise Beaumont who they think is best suited for the top job on Threadneedle Street...

So, now that 120 old white dudes have held the position, who should be the 121st Governor of the Bank of England?

Ghela Boskovich (Founder of FemTechGlobal):

"Of the names being bantered about, a few interesting candidates pique my interest: Shriti Vadera (chair, Santander UK) or Nemat Shafik. Or why not import one from the US? Janet Yellen (former head of the Fed) or Raghuram Rajan (former governor of Bank of India, now at the University of Chicago).

All qualified, all experts, and not one of them an old white dude."

Louise Beaumont (Exec Chair, Signoi):

"I'd pick Andy Haldane – because other than the obvious, he'd break the mould. He's blessed with curiosity, independence of thought, and an actual voice: he's taken it upon himself to expand his role to embrace data gathering and analysis; he's been thoughtful about the productivity conundrum; and he's willing to stand up and voice his own opinions, rather than be the grey man."

With 60% of Sapphire's placements over the past 4 years being women, it would seem as though the odds are stacked in favour of the ladies in this particular case. Coupled with the fact that its managing director Kate Grussing considers the lack of women in top corporate roles "truly disgraceful, lame and lazy", the chances of a progressive appointment seem all the more likely. That said, the final decision (to be confirmed in October) lies in the less than radical hands of Phil "The Spreadsheet" Hammond so don't hold your breath just yet... ◆**TFT**

NEVER TOO OLD TO LEARN NEW TRICKS:

From Christopher Wren to the blockchain

THE KEEPER OF THE CRYPT
Contributor

I've turned to churches throughout my long (I would insert illustrious here but better not) career not for spiritual guidance but for solitude - as the man said "a time for peace". My favourite for many years whilst I was on the trading floors of The City of London was St Stephen's of Walbrook where the wonderful Chad Varah was for many years the rector. These days I favour The Crypt. Now, as this is anonymous I'm not going to say which crypt but just "the crypt", needless to say it amuses me that a place so ancient is one letter short of a concept so modern.

Before I move on I just want to add a few words about the wonderful Chad Varah. Chad was the father of a dear friend of mine, Andrew, and sadly neither of them is with us anymore but both of their legacies live on. Andrew was the most wonderfully inventive carpenter, in truth the word hardly does him justice, and his work can be seen in the pews he created for St Stephen's Walbrook. Chad resembled a friendly Owl with his round spectacles and pronounced eyebrows. He was multi-talented and was involved in founding the great 1960's comics The Eagle, Girl, Swift and Robin. Almost unbelievably he was also technical advisor for the comic hero, astronaut Dan Dare. Most importantly in 1953 he started The Samaritans and in doing so must have saved thousands of lives. If you have time it's well worth reading his full obituary and indeed visiting St Stephens where the original phone that was used in the founding of The Samaritans is displayed with its memorable number - Man 9000 which despite it sounding like a biblical quotation is actually how we used to identify phone numbers in old money MANsion House 9000.

It's so easy to sit in your own little box and ignore new ideas and advances in technology. I can assure you that after 40-something years in the financial markets, many of my peers have stuck doggedly at one task. For myself? Well, that would bore me. I've tried to stay ahead of the game by keeping track of innovation be it the early days of financial derivatives, through open outcry trading and now in the electronic trading of crypto assets. It begs the question; are traditional financial firms rising to the challenges that fintechs are producing and are they, in turn, really revolutionary?

For many, the arcane world of the wholesale money markets are just that –secret and hidden and, let us be honest to those not directly involved, they are not something that one immediately wants to explore. Well for me they have been a lifetime of fascination and fun and looking back, they were, even in the 1970s a cloud based product. Let me explain why; away from exchange traded products, such as stocks and shares, in the money markets there was no centralised market. The images of hundreds of people standing in circles swapping price information was, until the 1980s, just representative of the commodity markets (Grain, Oil and Soya to name a few) not the foreign exchange markets.

The Foreign Exchange markets are made up of thousands of constituent parts, some connected electronically and some still by voice. To paint a picture of this, imagine a world wide web of people exchanging prices and ideas by phone and what do you have? A non-electronic web of buying and selling prices, a sort of cornucopia of prices flying around in the ether. In other words, a cloud created by thousands of participants. Extraordinary isn't it? For decades before the internet and cloud computing was even contemplated, the financial markets were creating an early version.

Even with the advent of new currencies, so-called cryptocurrencies, the larger trades are still executed OTC (over the counter) with little or no reporting of them. Increasingly transactions have become commoditised on exchanges and enabled efficient price discovery and reporting and this has led to companies, such as Currency Cloud, reinventing the wheel and building a successful model around an existing service and attaching a Fintech label to it . Is it really Fintech or is it another example of cobbling old services together to produce something seemingly sexy? I must say, and this is by no means a dig at a successful business such as Currency Cloud, that it deeply saddens me when a so-called Fintech business is actually just two or three old businesses put together. I mean is a pre-pay card and FX service really a banking service?

However, at present there are some classic cases of how some payments companies are adapting their products to support some of the newer innovative players in the market. Good examples of this can be found with the work that companies such as Afex and World First are doing with their API offerings. Traditional phone broking FX businesses like Afex can be seen as being stuck in the past but they are opening up their resources so that newer financial companies can utilise their technology and benefit from their suite of products, such as faster payment processing, which till now was the preserve of institutional clients. In effect Afex, a company with a heritage of over 40 years, and some of the other larger, well-established FX houses are offering the track for the newer companies to run their rolling stock on. A win win as it saves resources on both sides of the arrangement. This is a fantastic example of how new world meets the old and enhances both sides as we progress to a brave new world!

It's easy to get over involved with the problems of moving crypto assets to fiat but it is getting easier. As with any new instrument, there are teething troubles but it does seem the more innovative companies are finding solutions. In banking, the rise of "challenger banks" can only be a good thing. In my book, challenge leads to innovation and thus to progress. It is easy to compartmentalise old against new but in reality the old will only ever survive by adapting their existing businesses and designing new ways to access their offerings as will old brokers! ◆**TFT**

June 4, 2019
Tokenized Assets, London

This conference provides comprehensive insights on applying blockchain technology to the entire process of tokenizing a real-world asset and the creation of a security token.

thefutureof.finance/tokenized/london

June 6, 2019
Cross-border Fintech: Regulation and the Law 2019, London

The only platform where lawyers and leading experts come together to discuss latest disruption and trends in cross-border financial technologies.

iclg.com/glgevents/cross-border-fintech-regulation-and-the-law-2019

10th - 14th June, 2019
London Tech Week

Tech Week connects international communities from across the spectrum to address how access to tech for all can have a profoundly positive impact in society and business.

londontechweek.com

12 - 13 June, 2019
TechXLR8, ExCeL, London

TechXLR8 is London Tech Week's flagship event, revolutionising business by connecting people and technologies driving transformation.

tmt.knect365.com/techxlr8/

14 June, 2019
Real-Time Payments Summit, Sydney

Real-Time Payments are set to drive the most significant transformation in the global payments landscape since the introduction of today's electronic payment mechanisms.

rtpsummit.com/sydney/

19 - 20 June, 2019
Blockchain Expo Europe, Amsterdam

The World's largest Blockchain Conference and Exhibition focuses on the future of enterprise technology. Two days of top-level content from leading brands, embracing and developing cutting edge blockchain technologies.

blockchain-expo.com/europe/

5 - 10 July, 2019
Fintech Week, London

Fintech Week is a series of conferences, exhibitions, workshops, hackathons, meetups and parties.

www.fintechweek.com

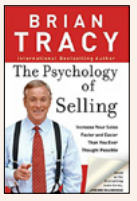
To see the full list of upcoming events in London and around the world, visit **thefintechtimes.com/fintech-events/**

Five Books To Get Ahead: Sales

By **JAKE COURAGE,** co-founder of the edtech company 42courses.com and avid reader, author & car fanatic

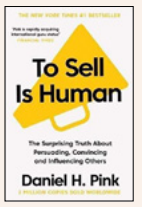
We are all salespeople. It's just that we don't think of ourselves that way. That's because most of the 'selling' we do in life isn't for money. It's for resources. More often than not, that resource is time. I.e. asking someone to spend their time doing something for you. Learning to sell is arguably the most important life skill. No matter what role you occupy in life, you will at some point have to convince others of something. Therefore, selling is not just a job, it's essential to the success of every living individual. Without sales, the whole world would come to a grinding halt.

Despite it being so important, we're not taught how to sell at school. What's more, as a job, 'sales' is often given a bad name. Everyone's heard at least one story about a dodgy salesman in their life. The below five books will convince you that sales is an honourable and vital talent that anyone can benefit from learning more about. ◆**TFT**



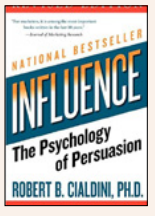
The Psychology of Selling: Increase Your Sales Faster and Easier Than You Ever Thought Possible
by Brian Tracy

Don't be put off by the fact that the author looks like the typical white-toothed self-development guru. Brian Tracy is the real deal and has consulted for many large organisations around the world. As the book implies, it is focused on the psychology of selling and that to be an effective salesperson, you need to develop the right mindset. Not only is a positive outlook a prerequisite, the author explains that self-discipline is also necessary. By this he means a successful salesperson needs to be comfortable with setting goals and must remain a life-long learner. Tracy makes things easier for the reader by including a helpful summary at the end of each chapter which acts as a great refresher of what's been covered. Overall, a valuable read.



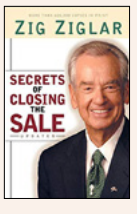
To Sell Is Human: The Surprising Truth About Persuading, Convincing, and Influencing Others
by Danile H. Pink

Pink has written a number of bestsellers including Drive and A Whole New Mind and this book is just as accessible and enjoyable. It's the quickest and easiest of the five books to read. In To Sell Is Human, he strikes a great balance between storytelling and factual research and gives the reader plenty of practical tools to start using immediately. In particular, he gives some excellent tips on how to pitch something as well as examining the need-to-know technique of 'framing'. This is the idea that we can present the same information in different ways to influence the desired outcome. Along the way, he finds time to reveal some surprising truths about sales including the fact that extraverts don't make the best salespeople.



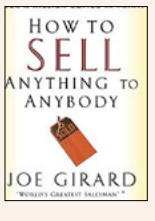
Influence: The Psychology of Persuasion
by Dr. Robert Cialdini

Dr. Robert Cialdini is recognised as one of the world's top experts in the field of influence and persuasion and this book doesn't disappoint. Over the course of seven fascinating chapters, Cialdini examines the psychology behind what motivates people to say "yes" and he shares a wealth of research to back it up. The book explains the six universal principles required to become a skilled persuader as well as how you can defend yourself against them. This includes the principle of reciprocity which is the idea that we are hardwired to return favours, no matter how small. Of the books listed here, this is perhaps the most indispensible. Grab yourself a copy.



Zig Ziglar's Secrets of Closing the Sale
by Zig Ziglar

Ziglar's wit and charm shine through in this book which is packed with over 100 'closes' or techniques for closing the sale. But don't be misled by the title, there is more to this book than just endless ways to close a sale. Amongst the many pieces of advice that Ziglar gives, one that stands out is the importance of believing in the product you are selling. To be convincing to your prospects, you have to be sold on what you're promoting. Ziglar also makes the case that the difference between a good and a great salesperson is the willingness to work that little bit harder. Whether that's making an extra appointment or following up on a recent customer to see how they are getting on with their new purchase, what matters is doing it with more energy and more enthusiasm than the next person. A criticism of the book is that it sometimes feels a bit repetitive and some of the content feels a bit outdated.



How to Sell Anything to Anybody
by Joe Girard

Girard held the Guinness World Record for the most successful car salesman. He achieved this accolade with next to no formal education so the lessons he learned on the way to the top are worth listening to. The biggest takeaway is that a single salesperson can only achieve so much on his or her own. The best salespeople make sure they forge strong partnerships with everyone in their organisation and take the time to invest in long-term relationships with their customers and not just look for the quick sale.

Can't wait for the books to arrive? Try a master class in Fintech, Behavioural Economics, Problem Solving, Sleep, Social Media and many more. Head to the website and click on a course title. The Fintech Times readers get 25% off with the code '**FintechTimes25**'. Have you enjoyed other books on AI? Please get in touch via **jake@42courses.com**