

Powering the fintech revolution

UK fintechs and the new wave of financial services



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Foreword



William Russell The Rt Hon The Lord Mayor of the City of London



Catherine McGuinness Chair of Policy and Resources, City of London Corporation

A new decade has started - and the world is coming to terms with an unprecedented change due to the global spread of COVID-19. Now more than ever, we are reliant on technology to support our everyday lives as we adjust to a new normal. Innovation in financial and professional services will continue to shape the sector as the UK fintech community rises to the challenge.

The UK leads the way for fintech in Europe. Venture capital investment into the UK reached an all-time high of \$4.9bn in 2019. As consumers face increased choice for digital services and products and businesses look to technology to drive innovation, the UK has fostered the scaling up of a variety of start-ups.

The City of London Corporation has long recognised the positive role that innovation can play in underpinning the development of the financial and professional services sector - and it is encouraging to see the UK fintech community play a leading role in supporting both consumers and businesses through the impact of COVID-19.

Technology is enabling regulatory processes for financial institutions and the UK is at the forefront of areas such as open banking and faster payments that benefit UK business. Challenger banks are giving consumers increased choice and access to their finances. Artificial intelligence underpins huge technological advances and companies are now developing products that demonstrate social impact and sustainability. These are just a few of the areas that the UK can showcase.

We are delighted to highlight these strengths and show where the UK is taking the lead – whether this is regtech, payments, artificial intelligence or tech for good. The UK continues to provide a supportive and nurturing environment for innovative firms. Effective policy, regulation and investment continue to build and scale firms and a strong and diverse talent pool provides start-ups with the tools to expand globally.

Given the context of upheaval and uncertainty facing firms, families and economies – we must not be complacent. Continued investment is vital at early stages of the fintech journey. Ensuring a healthy pipeline of investment will help the strengths and innovation of the UK sector to continue reshaping finance, to meet the world's changing needs and challenges.

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Fintechs to provide support in economic recovery and our 'new normal'



Charlotte Crosswell CEO, Innovate Finance

From paytech to peer-to-peer lending and insurtech to tech for good, the UK fintech sector is as diverse as it is large. Fintech employs many thousands up and down the country and is worth £6.6bn (\$8.5bn) to the UK economy.

Fintech (or financial technology) effectively encompasses any technology-enabled innovation that results in new business models, processes or applications within the financial services sector. The wide variety of UK fintech companies cover a diverse array of important roles: from helping financial services firms cut the costs of complying with regulations to making banking or foreign currency transfers cheaper, easier and more secure for millions of consumers.

Yet, in common with many industries, the COVID-19 pandemic has presented the fintech sector with significant challenges and opportunities.

Many fintechs, still in the phase of rapid growth, need access to capital. Some have successfully raised finance in the midst of the pandemic. Others may struggle. Government schemes, such as the Future Fund to support fast-growing businesses during the COVID-19 pandemic, are welcome. But we will continue to work with the government, regulators, banks and other trade associations to identify the solutions needed to allow the sector to continue to thrive.

The crisis serves also to remind us how critical the digital economy is to our lives and work. We have seen fintech companies respond quickly with accelerated product solutions that will help those affected by the crisis. For instance, firms leveraging open banking and verification of income or ID, companies which advance much needed salaries to those in need who cannot wait until payday or supporting those who need to refinance their loan to make ends meet. The future holds more prospects for such innovation. Advancements in machine learning and AI will power further advances in fintech services. The benefits will be far-reaching, cutting costs for companies but also improving services and lowering costs for millions of consumers.

Fintech can also help billions of people around the globe, through the democratisation of finance by providing choice for the consumer, including those who have traditionally been overlooked by mainstream financial services companies. We anticipate that fintech will impact everything - from how we conduct our day-to-day banking, manage our savings, borrow at affordable rates and support those wanting to improve their financial wellbeing.

Fintech was born from the 2008 financial crisis and recession that followed. Since then, technology and innovation have transformed finance, with consumers and businesses alike benefitting from a myriad of new products and services.

As we begin to operate in a 'new normal' post-COVID-19, fintechs will continue to play a critical role. It is at times like these that we really see the value of its out-of-the-box thinking, agility and bravery to try something new.

With continued support and investment, the sector will carry on developing innovative fintech products and services that are not just simpler, safer and easier to use, but also open to more and more people. The benefits will be improved global economic growth and increased prosperity for many.

I fully expect the revolution of fintech to extend from banking innovation and take root across sectors such as insurance, wealth management, asset management and pensions. Innovation in financial services has the ability to make a huge difference to our society, and to shape our economic development in the coming years.



Paytech: rebooting the payments landscape

The acquisition of UK-based Worldpay for \$43bn in 2019 set not just a fresh global record for a single investment in fintech, it also marked the biggest financial services takeover since the financial crisis.

The blockbuster deal symbolised not just the strengths of the UK payment technology sector but also how quickly the payments market is changing. The UK is leading this revolution as advances in technology make payments faster and easier and open up the potential for hassle-free transactions on a global scale.

In the UK, over two thirds of payments are now made digitally, according to UK Finance, up from below 40 per cent in 2007 with this trend accelerated, perhaps permanently, by the COVID-19 pandemic. This rapidly changing payment landscape has helped foster a thriving environment for UK paytechs which offer a wide array of services using contactless card technology or mobile wallets.

According to Accenture, UK customer numbers at neobanks (banks which operate entirely online and without a branch network) almost tripled in 2019 to just under 20m. The largest neobanks now have more customers

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In an unstable world people have got a huge regard for the stability of the UK. You know about title of goods. You know what the regulations are and the law is resilient. The reputation of the City of London, where Crossflow is based, as a global leader and innovator in fintech, paytech and financial services fuels confidence."

Tony Duggan, CEO, Crossflow than many of the UK's leading challenger banks, according to the consulting firm, highlighting their relative speed and agility in customer acquisition.

If anything, this pace of change is set to accelerate. Following rapid growth in the UK market, many UK fintechs are now expanding their services overseas. The future will also see further innovation and more competitors entering the market from global technology giants to consumer brands. This innovation presents both huge challenges and huge opportunities.

To name a few, further advances in payment technology will open up services to more people, helping reduce financial exclusion; data insights into payments are going to become more important and more valuable; and cross-border payments are going to become quicker, easier and cheaper. The pioneering UK paytech sector promises to be at the centre of this global revolution.



of the 'Fintech 50'

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Source: The Fintech 50 2019



CASE STUDY: CROSSFLOW

The lightbulb moment for Tony Duggan, one of the founders of paytech Crossflow, occurred at a Pizza Express restaurant.

With a background in both retail (he had served as Supply Chain Director at building supplies company Wickes) and finance (he had been Product Development Director at SWIFT, the global banking network), Duggan had seen at first hand the financial inefficiencies inherent in global supply chains.

Corporate purchasers of goods typically wanted to lengthen their payment terms to lighten their balance sheets. Suppliers wanted to be paid earlier. The way to bridge this gap was through loans. The only problem was that loan terms for suppliers were usually expensive.

Duggan's plan was to create a funding platform where suppliers could access cheaper finance allowing them to release working capital and save them time. So the idea for Crossflow was born.

With seeding funding from Duggan himself and a friends and family round, Crossflow built a base product which generated sufficient funding to cover the cost of a 20 strong team of developers, leading to Crossflow's launch in the City of London in 2013.

Its target market: the major corporates with annual payments to suppliers of in excess of £500m annually. And its pitch: big corporates that use Crossflow can extend their payment terms and thereby free up cash to ease their debt burden. In turn, they can offer their suppliers access to Crossflow's funding platform so that they can generate more cash on their

balance sheets and at lower lending rates than they would typically by charged by a bank. Crossflow makes its money by taking a small percentage charge on the loan rate.

120 days.

to capital.

Outside of the CCFF, Crossflow has facilitated \$2.4bn of funding and, having started in the UK, is expanding into other markets such as India with plans to rapidly grow its international sales and marketing team. According to Crossflow, the global respect for UK laws and regulations has proven key to the company's international success.

COVID-19 has highlighted the value of services such as Crossflow which digitise access to working capital, connecting corporates, their suppliers and institutional funders. That rapid access is supported by a global regulatory and legal framework with its bedrock in the City of London, one of the world's highest regarded financial centres."

Tony Duggan, CEO, Crossflow

The typical deal size on Crossflow's platform is \$22.5m, supporting supplier average payment terms between 60 and

Amid the COVID-19 pandemic Crossflow leveraged more funding out of London as capital markets in some geographies ceased up. It also helped facilitate the Bank of England's Covid Corporate Financing Facility (CCFF), providing funding to businesses through the central bank's purchase of short-duration commercial paper. Crossflow's technology platform helped digitise the facility giving many companies much-needed access



Regtech: navigating the compliance maze

Since the financial crisis, financial services providers have been hit by an array of new regulations. And with them new compliance demands. In recent years, Citibank alone has employed close to 30,000 compliance staff.

In Europe, the implementation of General Data Protection Regulation (GDPR) and the second Payment Services Directive (PSD2) have provided additional responsibilities for banks and financial services companies: by the end of 2020, EU-wide e-commerce card-based transactions must comply with new tougher customer authentication requirements.

Little surprise then that fintechs and established banks have been turning to a wide array of new regtech (or regulation technology) firms to understand how to comply with these regulations. Some estimates put the number of regtechs at over 150 with many of these based in the UK.

Indeed, the UK has become the leading global centre for regtechs. There are two primary reasons for this. Firstly, UK regtechs have grown hand in hand with the many UK fintech pioneers in payments and consumer banking. But, just as important has been the UK's forward-looking financial regulator, the Financial Conduct Authority, which has been responsive and pro-innovation, whilst maintaining excellence in compliance standards.

Often powered by AI or biometrics, regtechs can simplify and improve the process of onboarding customers or help combat money laundering and fraud. From ID verification to behavioural monitoring to identify fraudulent activity, the range of services offered by regtechs is wide. Their success lies in their ability to interpret complicated regulations and create code that makes this regulation compliance process quicker, easier and cheaper, reducing the need for vast compliance teams.



Image: Onfido



while maintaining high standards, UK regtechs are also empowering a broad range of new financial services, helping underpin growth in the wider fintech sector. This is true not just in advanced economies but also in countries where large swathes of the population have traditionally not had access to banking or financial services.

By helping keep compliance costs low,

The UK is the biggest venture capital market for payments outside the US, in terms of number and value of deals and the biggest market for regtech, in terms of number of deals.

Source: Pitchbook

CASE STUDY: ONFIDO

The early seeds of Onfido, an identity verification company, were sown when the company's three founders were still at university.

The technology was inspired by the finalyear thesis where one of the co-founders had developed a machine learning tool that could spot wildlife in images of the jungle. Husayn Kassai, CEO and cofounder, along with the company's two other founders – Eamon Jubbawy and Ruhul Amin (also fellow undergraduates at Oxford University) - soon saw wider uses, believing the technology could be used to help eradicate identity fraud.

The three were all members of the Oxford Entrepreneurs society, a club affiliated with the University of Oxford which claims to be Europe's largest entrepreneurial society. There they also met one of their early investors: renowned tech entrepreneur Brent Hoberman who had co-founded travel website lastminute.com.

Less then a decade on, this Londonbased startup has achieved numerous milestones with 10 overseas offices, raising over \$200 million in funding with backing from TPG Growth, Salesforce Ventures, SBI Investment, M12 -Microsoft's venture fund, and others. Today the company counts over 1,500 clients including Orange, the telecoms group, Remitly, a money transfer fintech, and Zipcar, a US-based car sharing company.

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The UK is a leading global financial centre, has strong, technological expertise and is a forwardthinking regulatory infrastructure. This goes some way to explain why the UK has become a global leader and pioneer in fintech."

Husayn Kassai, CEO & Co-Founder, Onfido

Onfido's proposition: it remotely verifies government IDs such as passports or driving licences better than humans and provides secure facial biometrics. Its tech solution allows banks, fintechs and other service providers to verify a user's ID remotely and check, via a live photo or video, that the person using the associated service is the same person on that photo ID. As the solution is powered by machine learning technology, it is constantly being improved and updated, being able to adapt and stay ahead of the fraud landscape.

In response to COVID-19, Onfido launched an initiative to provide identity verification to non-profits or organisations working directly on providing relief effort, and are increasingly being asked about immunity passports so that those who have been tested can become volunteers or return back to work.

Like many UK fintechs, Onfido initially targeted UK companies and, in particular, other UK fintechs which were global pioneers in fields such as payments or consumer banking.

The UK has proven an excellent springboard for overseas expansion. Today one-third of Onfido's clients come from outside financial services in fields as diverse as car rentals and office entry. North America is now its biggest marketplace, the company's reputation enhanced by investments from M12, Microsoft's venture fund, and the venture arm of Salesforce.

London has one of the world's highest concentrations of financial and professional firms, over



Sources: Investment Landscape. 2019; ONS, UK Business Counts, 2019 7



Artificial intelligence: accelerating new advances

The long-term potential of artificial intelligence (AI) is huge. According to McKinsey, AI could deliver additional global economic activity worth \$13tn by 2030. That is equivalent to additional global gross domestic product (GDP) growth of 1.2% a year by the consultant's calculations.

No wonder UK financial services companies are taking AI seriously. A report by Microsoft UK found that 72% of UK financial services companies said their organisations were using AI in 2019, with half of these companies saying they wanted to be leaders in Al.

The UK is well positioned for this revolution. London alone has 350,000 software developers and hosts more highly qualified AI experts than any other European city. Add to this the UK's 1,600 fintech firms, many of whom have AI and machine learning processes powering



Fintech first financing rounds increased to

\$148.2m in the UK in 2019

Source: Pitchbook - excludes accelerators and incubators

their product offerings, it is easy to see why the UK is a global leader in AI.

Key to this expertise is the UK's worldrenowned university system. Recognised as a global centre of academic excellence, many of the UK's universities are consistently ranked among the best in the world: two of the top 5 ranked global universities are UK based. The University of Oxford is renowned as a global centre for AI research in areas as diverse as robotics, driverless cars, healthcare and finance while the University of Cambridge is a world leader in mathematics and computer science.

Across the UK, 57% of the workforce is educated to degree level and the UK attracts over 450,000 international students from over 200 countries, providing companies using AI and machine learning with a vibrant talent pool.





A report by Microsoft UK found that 72% of UK financial services companies said their organisations were using AI in 2019, with half of these companies saying they wanted to be leaders in Al.

Source: Microsoft UK, 2019 Accelerating competitive advantage in Al

CASE STUDY: SUADE

One of the more significant companies in the AI sector is Suade, a UK-based fintech which processes large amounts of granular data on behalf of financial institutions so that their reporting requirements can be automated.

Suade was set up in 2014 by Diana Paredes and her co-founder Murat Abur. Diana has a background in sales and trading at investment banks Merrill Lynch and Barclays. Whilst working in the industry, she felt that technology, by collating and analysing vast reams of data, held the key to preventing the next financial crisis. Machine learning technology is embedded in Suade's product offering and the company expects AI to play an increasingly important role in the future.

Its clients, predominantly major investment banks and financial institutions, can achieve significant time and cost savings by using Suade software to comply with their global reporting requirements. In addition, clients of Suade have full access to their data, enabling them to spot unusual trends or potential problems early.

Such has been the success of Suade that it reached profitability in year one. It has remained profitable ever since, growing clients and revenue by around

Venture capital investment in UK fintech is growing and reached an all-time high in 2019 of

\$4.9bn

which is



year-on-year growth.

2019 VC Fintech Investment Landscape

150% annually. Paredes believes that being based in the UK has been key to this success, given the huge number of potential clients in London.

As an agile software company, Suade was able to continue operating normally during the COVID-19 pandemic. But, as a growing company, it used the period to reevaluate its strategy and processes.

The company continues to expand internationally. Having initially worked for the London offices of major global financial institutions, Suade is now supplying its software to many of these companies' global head offices.

We are very pro-London for the fintech scene because I don't think we would have been able to do what we are doing anywhere else in the world. In this field, clients are the first thing you need and our proximity to them in London has been crucial to our achievements so far."

Diana Paredes, CEO & Co-Founder, Suade



Tech for good: driving positive change

Consumers around the world increasingly want the companies providing them with products and services to deliver positive social and environmental outcomes from how they manage their employees or deal with their customers to how they are reducing emissions or cutting the use of plastics.

Technology is enabling companies to achieve many of these goals today. TechNation, a UK-government backed industry group, has identified 490 Tech for Social Good firms in the UK, encompassing areas as diverse as education, fintech and AI. To date these companies have raised in excess of £1bn from venture capital investors.

But there is much further to go. And the tech for good sector is broad, encompassing a wide range of technology companies which are making it easier for people to make charitable donations, who are tackling climate change or improving air quality or helping deliver sustainable cities with environmentally friendly buildings, transport or energy.

One UK-based start-up working with major drug makers uses AI to test new drug molecules on large data sets, significantly speeding up drug development times. Indeed, with Cambridge a leading global biotechnology cluster, the UK is pioneering technology innovation in the healthcare space, particularly in the search for COVID-19 treatments.

The UK is quickly establishing itself as a global leader in many other areas of the broadly defined tech for good sector too: London is ranked number 1 for the quality of its green finance offering in Z Yen's Green Finance Index 2020, the UK is the world leader in offshore wind farms and it has a thriving charitable sector employing over 800,000 people, to name just a few.

The non-profit sector currently represents £583bn of global transactions



CASE STUDY: GOODBOX



Image: Goodbox

Andrew O'Brien, a former investment banker and Founder of GoodBox, first came up with the idea behind GoodBox in 2016: to innovate and provide pioneering technology solutions for digital donations in our ever-increasing cashless society. The non-profit sector currently represents £583bn of global transactions, and underpins every corner of our societies.

Alongside Co-Founder, Francesca Hodgson who had spent over 10 years working with and for non-profit organisations, GoodBox has designed and developed award-winning hardware for digital giving and built a custom data platform. The GoodBox proposition consolidates multiple service offerings including contactless giving and provides non-profits with a single point of entry to service their digital fundraising needs.

In addition to the provision of tailored donation terminals, GoodBox provides consultancy advice and data analytics to improve fundraising strategies. To date, GoodBox has worked with over 1,000 non-profit organisations (from London's Natural History Museum to the Church of England) and helped charities raise over £4m.

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The UK is a wonderful place to have founded a business. Investment schemes such SEIS and EIS with their favourable tax breaks have derisked early stage investments. Research & Development tax credits when innovating hardware have been game changing to small companies pioneering the future. Furthermore, accelerator programmes and networks available to early stage companies are hugely beneficial and have given us invaluable strategic direction and support."

Francesca Hodgson,

Co-Founder and Managing Director, GoodBox

GoodBox attributes much of its early success to timing and a serviceable need; a fast-growing market in digital money transactions and an underserved sector made GoodBox a compelling proposition to both investors and customers from day one. Never was this more true than during the economic crisis spurred by the global COVID-19 pandemic, which added rocket fuel to the demise of cash. GoodBox received unprecedented demand to explore new digital tools to allow fundraising to continue in the socially distanced climate.

Longer term, GoodBox is focused on enhancing its range of service offerings and providing a marketplace that better connects donors with the causes they care about.

US-backed venture capital investment in UK fintech also reached an all-time high of



across 100 deals in 2019

Source: Pitchbook



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