TheCityUK

In association with:

Bank of Russia

MOSCOW international financial centre

UK-RUSSIA FINTECH WORKING GROUP

Case studies and insights

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TheCityUK

TheCityUK is the industry-led body representing UK-based financial and related professional services. In the UK, across Europe and globally, we promote policies that drive competitiveness, support job creation and ensure long-term economic growth. The industry contributes nearly 11% of the UK's total economic output and employs over 2.2 million people, with two-thirds of these jobs outside London. It is the largest tax payer, the biggest exporting industry and generates a trade surplus greater than all other net exporting industries combined.

Bank of Russia

The Central Bank of the Russian Federation (Bank of Russia) was founded on July 13, 1990, on the basis of the Russian Republic Bank of the State Bank of the USSR. The law specified the functions of the bank in organising money circulation, monetary regulation, foreign economic activity and regulation of the activities of joint-stock and co-operative banks.

The Bank of Russia carries out its functions, which were established by the Constitution of the Russian Federation (Article 75) and the Law "On the Central Bank of the Russian Federation (Bank of Russia)" (Article 22), independently from the federal, regional and local government structures.

The goals of the Bank of Russia are to protect the ruble and ensure its stability, promote the development and strengthen the Russian banking system, ensure the stability and development of the national payment system, develop the financial market of the Russian Federation and ensure its stability.

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FOREWORD

Across the world, FinTech is transforming financial services. It is revolutionising the way products and services are delivered, opening up access to competition from new entrants, and allowing customers greater and more flexible access to their financial services providers.

The UK has positioned itself at the forefront of the FinTech revolution, outpacing the global market in terms of FinTech investment growth. As a leading global FinTech hub, the UK-based sector employs over 60,000 people across the country and in 2015 was valued at around £6.6bn. Its success underpinned by the heritage of the UK's world-leading financial services ecosystem, helping to make Britain one of the best places in the world to start, grow and scale a FinTech company.

Russia, on the other hand, has a relatively young but rapidly growing FinTech ecosystem. According to recent data, Russia already ranks third globally among the top 20 largest Fintech markets.

FinTech offers significant scale efficiencies in financial services, but it does need to also comply with a robust regulatory framework that preserves resilience, safety, and transparency. In that regard, Russia faces similar challenges to the UK, particularly against the backdrop of its aim to make Moscow an international financial centre. We believe that by operating at sector to sector level, with strong engagement between the two, the UK and Russia may understand the fast-evolving market landscape, and through shared insight, promote and support growth of new business – domestic and international.

This is why, as part of our UK-Russia FinTech Working Group initiative, TheCityUK, alongside the Moscow International Financial Centre and the Bank of Russia, have compiled this paper to consider key aspects and opportunities for the sector and serve as a guide to helping develop mutually beneficial areas of knowledge and interest.

We hope this paper will help to deepen areas of FinTech cooperation between Russia and the UK. It is composed of case studies and insights into FinTech, each written by a member of the UK-Russia FinTech Working Group. We encourage readers to treat the paper as a starting point for further engagement, rather than an exhaustive guide for future collaboration. We are confident that the range of issues discussed throughout the paper will generate strategic and commercial outcomes for both countries.

This paper has been made possible by the financial support of the British Embassy, Moscow and with input from UK and Russia-based FinTech organisational and commercial stakeholders participating in the UK-Russia FinTech Working Group. We would like to thank everyone who has contributed.

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CASE STUDIES AND INSIGHTS

ROLE OF EXCHANGES

London Stock Exchange Group

London Stock Exchange Group

Stock Exchanges sit at the heart of financial centres, catalysing innovation, entrepreneurship and economic growth. They enable growth through capital raising, convening the community to share research and insights, and offering execution channels for investors seeking and providing liquidity through secondary trading.

London Stock Exchange Group enables the global community to convene for the issuance and provision of capital for deployment world-wide. Buyers and sellers transact with confidence. Where companies or sovereigns originate from countries other than the UK, their capital raisings on London Stock Exchange Group via international investors effectively serve as FDI to these countries, supporting local jobs and enterprise.

It is the privilege of London Stock Exchange Group to have raised capital for companies and sovereigns that operate in more than 100 countries. Last year was remarkable: 107 initial public offerings (IPOs) raised $19.5bn, ranking London Stock Exchange first in Europe. Furthermore, nine out of 10 of these largest IPOs were international.

London is fast establishing itself as the home for technology companies and the global hub for FinTech. Listed in London are around 160 technology companies with a total market value of more than $231bn. Venture capital investment in UK FinTech companies in 2017 increased 37% to $600m – one of the world's highest levels of investment alongside the US and China. 2018 will be the third year London Stock Exchange Group convenes its FinTech Investor Forum, showcasing the most exciting and ambitious global FinTech companies. It is an opportunity for firms to connect with the investors and advisors who want to help them achieve their enormous growth potential and forms part of the UK's wider FinTech Investor week. This reflects the dynamic relationship among private equity, venture capital and institutional investors that participate in publicly listed companies. Capital providers increasingly are supporting each other across the equity funding ladder.

London's largest tech IPO in 2017, Alfa Financial Software, raised $360m, one of the largest UK tech listings since 2015. And currently, the UK is the home to four FinTech 'unicorns' – companies valued at $1bn or more – with a combined valuation of $18.5bn. However, FinTech opportunities for entrepreneurs and investors span much further than 'unicorns'. London serves large and small companies, giving them access to a unique deep liquid pool of investor capital.

Consider the case study of Boku, a FinTech company founded in San Francisco in 2008 that chose to list in London in 2017. The Delaware incorporated company received around $87m of funding from venture capital names, including Andreesen Horowitz, Benchmark Capital, Index Ventures, Khosla Ventures and NEA. But for its next stage of expansion, Boku chose to list in London. It successfully raised $59m on London Stock Exchange Group's global growth market, AIM, with a market capitalisation at IPO of $165m. Of the $59m capital raised, around $40m of the IPO proceeds represented a partial sell down by the existing venture capital shareholders. Providing capital for this IPO in London were a number of long term institutional investors, including: River & Mercantile; Schroders Investment Management and Legal & General Investment Management.

Today Boku has grown to become a leading provider of carrier billing services connecting merchants with mobile network operators in more than 50 countries, with annual revenues in excess of $20m. From this case study there are a number of key insights. In contrast to the US, London offers a viable IPO venue for growth businesses, including those from America, with sub $500m valuations targeting IPO deal sizes of $10m to $100m. This presents listing opportunities for technology companies with annual revenues of $5m to $100m, in particular pre-revenue mid-late stage BioTech and commercial stage MedTech businesses. More or less unique to London, compared with other listing venues, are high quality long term institutional investors on the buy side with small and micro cap expertise and a strong appetite for international growth companies. This characteristic is a highlight of London's capital markets and highly relevant to today's FinTech businesses. And the myth around US valuations also no longer stands true. Overall, there is no persistent evidence that listing in the US delivers higher valuations at IPO or thereafter, in fact there are many examples of the very opposite being true. In technology verticals as diverse as online marketplaces, semiconductors, payments and cybersecurity, UK listed companies achieve and maintain superior valuations. Lastly, the London ecosystem provides potential for venture capital and private equity shareholders to sell down at IPO and achieve partial exit while continuing to participate in the growth of the enterprise. In contrast, sell downs by existing shareholders at IPO is very unusual in US growth IPOs.

FinTech is set to feature ever more widely with the attention and ambitions for smart cities, internet of things, artificial intelligence, machine learning, distributed ledgers including blockchain. Similarly, financial centres thrive on interconnectivity, and technology catalyses access. To this end, London Stock Exchange Group's business support and capital raising programme, ELITE, has evolved to become the training ecosystem of choice for high growth private small medium enterprises (SMEs).

Launched in 2012 by our sister exchange, Borsa Italiana in Italy, ELITE has grown to serve over 700 companies from across more than 28 countries representing:

- €57bn aggregate revenues
- 260,000 employees
- 10 industries
- 34 sectors.

ELITE companies cultivate relationships, become customers and counterparties. For example, 207 ELITE companies have been involved in 467 transactions worth more than $6bn across the world. 130 ELITE companies have engaged in 248 merger and acquisition (M&A) and joint venture deals. 81 ELITE companies participated in 126 private equity venture capital transactions and 36 ELITE companies have raised bonds worth more than $1bn notional. Fourteen ELITE companies have listed on a public market, raising more than €440m.

London Stock Exchange itself can cite three recent examples of ELITE companies that have set various capital raising precedents:

1. IntegraFin, a FinTech company that provides platform services to UK financial advisers and their clients through its award winning platform, Transact, was the first ELITE company to join the Main Market of London Stock Exchange Group. It was valued at £649m when it listed.
2. LendInvest, the UK online platform for property lending and investing, was the first ELITE company to list a retail bond on London Stock Exchange Group's Order Book for Retail Bonds (ORB), raising £50m.
3. Van Elle, the UK's largest geotechnical engineering contractor, was the first ELITE company to float on AIM, the global growth market of London Stock Exchange Group, raising £49m.

Welcoming IntegraFin to London's markets was a cause for celebration for the company and a beacon for fast growing businesses across the UK. IntegraFin is one of three major Fintech listings on London Stock Exchange in 2018 so far, joining Vantiv/Worldpay and TruFin. It demonstrates the UK's ability to grow and support ambitious companies and London Stock Exchange Group's commitment to backing these firms not only at IPO but throughout their growth journeys.

London Stock Exchange Group plays a leading role in championing the thriving domestic and global Tech sector, supporting dynamic firms from FinTech to Biotech at IPO and throughout their development.

Dr. Robert Barnes, Chartered FCSI

Global Head of Primary Markets and CEO of Turquoise Global Holdings, London Stock Exchange Group

FINTECH FOR FINANCIAL CENTRES

NAUFOR

It would be fair to say that one of the top priorities for building an International financial centre in Moscow is stimulating domestic investment demand and fostering a new class of domestic retail investors. To achieve these goals, we should re-think distribution principles.

The Russian National Association of Securities Market Participants (NAUFOR), with the support of Moscow International Financial Centre Taskforce, made it possible for the securities market to be the first financial industry in Russia to open online retail a few years ago. Currently 40 companies sell their financial products online. The share of online agreements has hit 80-90% in some companies. The next challenge for us is to create a new institution – investment advisors – for our industry to rely on a new distribution and consulting network.

A new bill was passed by the Duma and signed by the President in December 2017. This law introduces a new financial industry in Russia: investment advisors, including independent advisors. The law comes into force in December 2018 and with it a new type of securities market participant will be introduced in Russia. According to the law, all brokerage firms consulting with retail clients in Russia will have to become investment advisors, and educate and certify their sales staff.

We have also implemented a new type of market participant – an independent investment advisor – for a small firm or a private entrepreneur. According to the law, both companies and independent advisors need no license to become a market player, however they are obliged to become members of a Self-Regulatory Organisation (SRO), the chief supervising body for advisors. The Bank of Russia will act as regulator and maintain a register of advisors.

Speaking about the new profile of financial sector professionals, it is important to note that all software, websites and mobile applications which help investors build portfolios, will also be deemed part of investment advisory and will have to be authenticated by Bank of Russia or by the SRO.

NAUFOR has an agreement with the Financial Planning Standards Board (FPSB), the US institution that manages certification, education and related programs for financial planning organisations, certifying over 170,000 professionals in 13 countries (mainly in the US). NAUFOR is planning to adapt FPSB programmes and exams locally to educate and certify investment advisors.

NAUFOR has created a new body – the Board of Investment Advisors – which will be the main source of market expertise used for creating with the participation of the Bank of Russia a legal base to cover all aspects of financial advisors' daily activities, from 2019 onwards.

On top of that, NAUFOR and the FinTech Association are working on a special case of payments for retail clients, to be implemented in the fast payments platform. This unique case, de jure 'Consumer-to-business (C2B)' and de facto 'me2me', will allow domestic securities market participants to implement a pull system (send funds requests to retail banking accounts from the broker's bank side). This scheme has no peers worldwide and will be extremely helpful for domestic securities market participants given the recent implementation of long-distance identification.

THE IMPORTANCE OF ECOSYSTEM ECONOMICS

MOTIVE PARTNERS

Motive Partners

Innovation and collaboration have been a hot topic in today's business community in recent years, particularly within Financial Services. Technology has had a profound impact on all industries and it has enabled the rate of innovation to increase dramatically. It comes as no surprise that according to PwC's Global Top 100 Company report of 2017, 20% of the global top 100 companies by market capitalisation are pure technology providers, not including businesses such Amazon and Alibaba that provide their services solely through technology. By nature, innovators are pathfinders and pioneers, but more than ever they require commitment and support from the industries they serve and an environment that enables partnership and competition. Ecosystem economics has never been so important

Why does successful innovation today require partnerships?

If we benchmark innovation as deploying new market leading technologies to make consumers' lives and businesses' operations more efficient, cost effective and secure, then it is our firm belief that the best way to do this is via partnership models.

By nature, partnerships can and should help create economies of scale, which many smaller firms are unable to create effectively alone but can contribute to plentifully alongside other businesses. In Research and Design (R&D), ensuring the economic benefits of multiple parties inputting their own expertise can lower the cost, add to the outcome and critically reduce duplication of R&D time and cost.

From a global perspective, international partnerships and communication can help businesses reduce R&D duplication. While some inefficiencies are acceptable, as technology breaks down international logistics and communication barriers, these will become less acceptable. Cost and time efficient R&D is a crucial part of innovation and improving equity value, therefore by improving knowledge transfer, ensuring wide spread best practice and increasing the size of the network across the globe through partnerships, we improve the overall outputs – distribution is the new capital, in more ways than one.

What are the right ingredients for global innovation hubs?

The Z/Yen Group's Global Financial Centres Index (GFCI) defines a financial centre as: 'Financial centres funnel investment toward innovation and growth. Vibrant, competitive financial centres give cities economic advantages in information, knowledge and access to capital.'

The key ingredient for the nuanced Innovation Hubs, building on the definition above, is collaboration and international partnerships. Geographic location is often perceived as major barrier to international partnership success, particularly when growing a business into new markets. Creating bridges between countries is a simple solution for this as it breaks down barriers into new markets and improves the likelihood of cross-border relationships. Look no further than the UK, creating FinTech bridges and providing access East and West. However, it is important to remember that GDP is driven by businesses rather than governments, and that the responsibility should be on businesses to form business-to-business partnerships.

For innovation hubs to exist, right touch regulation is key. In today's financial services sector, there is arguably nothing more important than pro-competition regulation with directives like the Second Payment Services Directive (PSD2); the Markets in Financial Instruments Directive II (MiFIDII); the General Data Protection Regulation (GDPR); and regulations alike outside of Europe instructing the industry towards more fairness and transparency for the benefit of the consumer and businesses alike. For these regulations to work effectively the industry must work together to create and adhere to the new benchmarks and standards. Regulators must also be open and ready to work with businesses to create this environment and create more of a win-win ethos in an industry that has been traditionally plagued by greed. The UK's Financial Conduct Authority (FCA) has been a leader in setting these standards for the financial services sector. The FCA's regulatory sandbox is a prime example and has been replicated across the globe. The sandbox allows businesses of all sizes to test their operations and compliance in a safe environment, and gives regulators a chance to learn and improve regulation based on real-time data.

What are the biggest opportunities in financial services innovation via collaboration?

The creation of collaborative industry utilities in non-competing areas of financial services is the logical next step for the industry. Due to stakeholder, regulatory and consumer pressures financial institution boards are under pressure to improve efficiencies by investing in innovation, reducing overheads and then also increasing top-line growth and capital risk ratios. Building utilities solves both these issues and create upside for those that buy-in via equity value creation, but most importantly increase in effectiveness as more partners are added to the utility, driving down the servicing costs. Obvious areas to create utilities in financial services include: trade surveillance, post-trade settlements, creating data and artificial intelligence (AI) focused utilities.

Similarly, having international partnerships on issues such as cyber-security, data and compliance is essential, particularly as technology embeds itself further into society. For this to happen cross border partnerships between regulators and businesses are critical.

By collaborating more globally we will also improve systemic risk and risk management as many of the businesses that solve issues around risk are based on network effects. A company such as LMRKTS, which reduces risk by providing multi-lateral and dimensional portfolio compression in a way that drives down exposures and reduces costs for every participant, has the potential to create benefit across the global economy – the company has reduced over $4trn of counterparty risk in the past 18 months alone. As a network model, the more partners LMRKTS has the more effective it is – the embodiment of Ecosystem Economics.

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REGULATORY AND LEGAL ASPECTS OF FINTECH

Michelmores LLP and Freshfields Bruckhaus Deringer LLP

The term FinTech is used to describe the application of technology to financial services. Technological change in financial services is nothing new, but what is new is the pace of change coupled with a significant amount of investment. FinTech is affecting all aspects of financial services, from disruptors to collaborators, retail services to investment banking, front office to back office. FinTech has also brought to light entirely new services and products that didn't exist five years ago – for example, virtual currencies, distributed ledger technology, crowdfunding, robo-advice.

In relation to these new products and services, the applicable regulatory position is not always clear. Taking virtual currencies (also known as cryptocurrencies) as an example, a key problem for regulators is the definition of cryptocurrencies and tokens – a clear definition is an essential pre-requisite to 'good' regulation. It seems that the prevailing view among regulators is that cryptocurrencies are more akin to an asset class than a currency.

At present, the three key areas of concern shared by regulators worldwide relating to cryptocurrencies are:

- consumer protection (including the protection of personal data)
- the prevention of financial crime, in particular money laundering
- the integrity of the markets.

Currently, we find ourselves in a somewhat counter-intuitive position. National regulators are reluctant to regulate, or indeed, may not be sure how to regulate, whereas many participants want to be regulated so as to have the badge of credibility that goes with authorisation.

Regulatory enforcement in this area can be sporadic and primarily focused on money laundering, (see the US authorities acting against the Silk Road).

Initial Coin Offerings (ICOs) have also received a lot of attention recently, being ways of raising funds from the public, effectively by way of a coin or token sale – usually in exchange for cryptocurrency. The regulatory position in relation to ICOs is similarly not always clear (and where it is, it is often because ICOs are banned). The confusion is compounded by the fact that the broking of ICOs may well fall within regulation. A number of regulators have caveated their position by stating that the characteristics of the token issued will determine whether the token is considered to be a security, a form of payment or a representation of some sort of service or utility. The current position of many regulators, which appears to be one of 'wait and see', is unlikely to be sustainable in the longer term. Indeed, we are beginning to see guidance emerging (e.g. in Switzerland).

As to consumer protection, in the UK for example, ICOs are generally unregulated (although again, this depends on the characteristics of the coin being offered) but the FCA has issued stark warnings to consumers about the risks.

At the other end of the FinTech spectrum are financial services or products which, although enabled by cutting edge technology, clearly fall within regulation. Regulators are also starting to be much more encouraging of start-ups and new services. In order to encourage competition through advances in technology, in many countries, national regulators now have the powers to relax their requirements or provide guidance through so called 'sandboxes'. Sandbox participants may benefit from lighter-touch regulation, but are required to provide often detailed information to the regulator which will help better inform regulation going forward. Here regulation appears to be working well.

Predominantly, regulators are tending to follow 'neutral' regimes (or relying on their existing frameworks) rather than producing detailed rules and regulations specifically on FinTech. This is often through 'principles based' regimes where regulators have greater discretion and flexibility.

Two further important issues relate to the protection of personal data and intellectual property (IP). The introduction in the EU of the GDPR, with its enhanced requirements, will have a significant impact on many FinTech companies. Improved methods of IP protection are also likely to be required to enable FinTech companies to flourish.

In the UK, the FCA has four objectives. Its strategic objective is to ensure that the relevant markets function well.

The FCA's operational objectives are to:

- protect consumers – the FCA aims to secure an appropriate degree of protection for consumers
- protect financial markets – with the aim to protect and enhance the integrity of the UK financial system
- promote competition – the FCA aims to promote effective competition in the interests of consumers.

It is worth noting the FCA's focus on financial inclusion and the ability of FinTech to provide services to vulnerable consumers. In 2016, the FCA hosted a TechSprint event focussing on this and the only mention of FinTech in the FCA's 2017 mission related to financial inclusion:

"We can use our convening powers to bring participants together and explore innovative ways of improving market effectiveness, such as developing FinTech to reduce the cost of financial services or to extend access to vulnerable consumers."

It also features as one of the eligibility criteria of the robo-advice unit (potential to deliver lower cost advice or lower cost guidance to unserved or underserved consumers).

Noting in particular that innovative tech can create better competition, the FCA is seeking to promote innovation as part of the 'virtuous circle' of competition, where competition is a very powerful driver of innovation and vice versa. With that in mind, the FCA set up Project Innovate,[1] which aims to tackle regulatory barriers to allow firms to innovate in the interest of consumers. Project Innovate consists of:

- direct support and guidance
- an advice unit – a dedicated team providing feedback to firms developing automated advice and guidance models
- the sandbox – ultimately to facilitate testing
- engagement with others, covering industry (such as the FCA's 'themed weeks'), regional engagement (i.e. outside of London) and international engagement with other regulators.

In respect of the FCA innovation agenda and the sandbox, it has available, where permitted, certain tools, such as restricted authorisation, individual guidance, waivers of rules and no-enforcement action letters.

Looking to crowdfunding as a practical example of legislating a new area, the FCA reviewed the peer-to-peer lending sector and noted that while equity-based crowdfunding platforms were already likely to be included in the regulatory perimeter, loan-based platforms (also known as peer-to-peer lenders) were not. When it took on competence for consumer credit activities in April 2014, the FCA brought in a bespoke, lighter-touch regulatory regime which applied to the operators of loan-based peer-to-peer platforms. The FCA has been keeping developments in the peer-to-peer lending sector (both equity-based and loan-based) under review. We expect to see revisions to the regulatory regime in the future, including a consultation paper with proposals for rule changes, addressing the concerns raised by the FCA in its interim review paper. While this might be somewhat difficult for the affected providers, who will need to keep updating their policies and procedures, as well as keeping up to date with the regulatory requirements that apply to them, the intention of the review is a proportionate and appropriate regulatory regime.

The European Commission is also considering legislation on crowdfunding and has very recently published a proposal whereby operators of platforms can 'opt in' to an EU framework. This includes an EU regime that platforms wishing to conduct cross-border activity could opt into, while leaving the rules for platforms conducting only national business unchanged. Whether this will be the ultimate outcome for this proposal remains to be seen.

[1] FCA Innovate, (March 2018) available at: https://www.fca.org.uk/firms/fca-innovate

FINTECH: REGULATION OBJECTIVES IN RUSSIA

Moscow International Financial Centre

Introduction

There is currently no fixed universal approach to the definition of the FinTech sector and, therefore, the prospective subject of legal regulation has not been defined as well. The consensual understanding of FinTech is only forming. Suggested definitions of FinTech include:

- Innovative solutions and technologies serving to improve existing financial products and services and/or develop new ones.
- A complex system encompassing hi-tech and financial services sectors, startups and related infrastructure.
- Startups offering financial services.

For the intents and purposes of this study, we propose to approach FinTech from the perspective of businesses (traditional financial institutions as well as startups) which use new technologies to provide financial services. However, this study does not cover cryptocurrencies and ICO regulation, since the concept of their prospective regulation model in Russia has largely been finalised. On 21 October 2017, President Putin ordered the Bank of Russia and the Russian government to develop ICO regulation to resemble the IPO regulation mechanism, and to develop cryptocurrency regulation based on the status of the Ruble as the only legal tender means of payment.

Recently, many regulators, including the Bank of Russia, have announced their efforts to develop the best possible FinTech regulation options, and launched public consultations. Financial Stability Board (FSB), International Organization of Securities Commissions (IOSCO), Financial Action Task Force (FATF), European Banking Authority (EBA) have also studied FinTech regulation practices in various jurisdictions and published their reports.

Summary of UK-Russia FinTech Working Group study

Based on the studies of prospective FinTech regulation model in Russia, carried out by the UK-Russia Fintech Working Group, we present the following summary:

- The absence of FinTech regulation approaches in Russia undermines the competitive edge of the Russian jurisdiction, forces Russian FinTech companies to register abroad (Singapore, Indonesia etc.) and hinders foreign access to the Russian market.
- The choice of FinTech regulation model should be based on new financial products and services, powers of the regulator, the nature of new social interactions triggered by FinTech.
- FinTech regulation may be implemented through improved controls (if no new social interactions emerge), or by developing new statutory norms (if new social interactions do emerge).
- Key objectives for the regulator and the government in the process of FinTech regulation are: maintain financial stability, protect customers and investors, protect competition, comply with anti money laundering (AML) laws. The regulator must be aware of the cross-border nature of FinTech business.
- In the interest of FinTech development, authorities must be guided by international regulation efforts (by signing cooperation agreements with countries which have or are due to launch regulatory sandboxes, by harmonising law in Russia and the Eurasian Economic Union in order to expand the FinTech market, etc).
- In the interest of maximising Russia's competitive edge as a jurisdiction, a decision should be made on establishing a regulatory sandbox.
- From a legal standpoint, the regulatory sandbox may be considered a legislative experiment, most commonly construed as duly authorised limited testing of proposed amendments for effectiveness, benefits of experimental norms and test-driving best scenarios for future legislative decisions. Prerequisites for the experiment are contained territory and/or timeframe.

- Regulatory sandbox requires maintaining constitutional equality and non-discrimination of groups or individuals by establishing:
- sandbox conditions: determining the nature of exceptions, expiry period, eligible cases
- temporary exceptions, possible scalability of applied norms
- review procedure and KPIs for experimental norms.
- Statutory conditions for establishing the regulatory sandbox in the Russian Federation are pursuant to the nature of legal norms binding the sandbox parties.
- To impose on companies new norms conflicting with current law, or to enforce exceptions from current regulation, sandbox regime must be introduced by issuing an equally valid act.
- Therefore, sandbox regime can be imposed in Russia by amending federal law through a new federal act or by amending the Central Bank Federal Act and vesting the regulator with the right to introduce sandbox regime for FinTech companies.
- Regulatory sandbox may be augmented by FinTech self-regulatory elements by establishing a FinTech association or SRO and submitting its application to the regulator.
- Apart from the sandbox, the regulator can simplify market access for FinTech companies by offering market participants consultations on current laws and their application to new financial products.
- For this purpose, it is advisable to consider vesting the Bank of Russia with the right to construe current statutory norms for the financial sector.
- A standalone means of FinTech development is tax incentives for FinTech companies.
- Regulators may also use the possibilities of FinTech technologies to boost the effectiveness of regulation and control. A fundamental solution for the problem of over-regulation would be to introduce RegTech into legislation and decision-making by state authorities.

Presidential orders on Fintech

On 21 October 2017, the President of the Russian Federation commissioned the government and the Bank of Russia to develop proposals and draft laws to regulate FinTech. Currently, the following bills and papers are under consideration:

- **Digital Assets Federal Act bill** (by the Ministry of Finance and the Bank of Russia)
  The bill defines digital assets, including cryptocurrency, their trading specifics, and regulates ICOs. It is undergoing public debate until 20.03.2018.
- **Crowdfunding Federal Act bill** (by the Bank of Russia)
  The bill stipulates that one of the methods of crowdfunding shall be token acquisition, and lists all property rights of token owners. At present, the regulator has commenced voluntary testing of crowdfunding regulation principles in order to improve the bill. Testing results will be available in Q2 2018.
- **Main Strategies of Fintech Development 2018-2020**
  The paper has been drafted by the regulator and envisions a regulatory sandbox by the Bank of Russia. According to the paper, regulatory sandbox regime will be implemented in two stages: testing of innovative FinTech and contained regulatory testing.

RUSSIAN REGULATIONS CONCERNING FINTECH

CIS London

The improvement of the Russian law, in particular the definitions below, would help to promote Russian financial markets (and Russian jurisdiction in general) as attractive to foreign companies.

Russian law lays down general requirements and restrictions relating to the financial services however does not provide a clear guidance on how those provisions apply in cross-border business relations. To avoid the risks of breach of the legal and regulatory requirements it is essential for market players offering financial services on a cross-border basis to understand the territorial reach of the local laws.

In the absence of legally defined rules on a cross-border application of certain provisions and restrictions under the laws on the securities market and banking laws, foreign companies face regulatory risks when engaging in financial services with Russian counterparties.

The following restrictions under the Federal law dated 22 April 1996 No. 39-FZ 'On securities market' would be an example of the foregoing situation – the law prohibits foreign companies to:

(1) Carry out any activity of non-credit financial organisations (including regulated financial services activities) within the territory of the Russian Federation.

(2) Offer and distribute to the general public the information about the financial services of foreign companies and their activity on the financial market within the territory of the Russian Federation.

In parallel, the restriction under section (1) above should also apply to credit organisations despite the absence of an express restriction in the banking laws.

Providing a clear legislative framework for the requirements and clarification of the restrictions would make the rules more comprehensible for foreign companies engaging in transactions with Russian counterparties. For example, it is necessary for the legislator:

- To clarify the concept of 'within the territory of the Russian Federation' for the purposes of the restriction under section (1) above (e.g. does it cover singular 'fly-in' activities or offering services on a 'reach-in' basis by phone and email).
- To expressly state the conditions which would exclude the application of the restriction referred to in section (2) above: e.g. the services are offered (and the information about the services is provided) to particular targeted in advance clients on a discreet one-to-one basis, the offering of services (and provision of information) is addressed to such targeted users only, the offering of services (and provision of information) does not amount to advertising.

The following guidelines of the Bank of Russia would help the growth of the FinTech sector in Russia (such guidelines shall be further published on the website of the Bank of Russia):

- Guidelines providing for a brief description of every type of regulated activity on the financial market in Russia, including the structure of such activity and key regulatory requirements.
- Guidelines on the form and the procedure of application by the founders of FinTech start-ups for the regulatory approach that keeps up with the innovations (regulatory sandbox).

Given that a FinTech start-up has at its core a new tech solution and an alternative business model, the founders usually face the need to explore the relevant regulatory framework applicable to their project. The language of the Russian laws on financial services is very complex. Such Guidelines drafted in a clear and comprehensible language would help the founders of FinTech start-ups to identify the relevant legal and regulatory requirements applicable to their projects, or to make an application to the regulator requesting the regulator to develop the regulation that would be favourable for the implementation of the new projects.

In return, the regulator would become proactively involved in the enhancement of the financial services market instead of a mere control and regulation function. Active collaboration between the founders of start-ups and the regulator would help let down the bars for the development of the FinTech industry in Russia.

ACCA Think Ahead

ATTRACTING AND TRAINING THE STUDENTS OF TODAY FOR THE JOBS OF TOMORROW

The Association of Chartered Certified Accountants (ACCA)

Organisations cannot attract, nurture or retain the finance leaders of tomorrow in the same way as the leaders of today. With innovation and the pace of change at an all-time high creating a 'new normal', and drivers such as globalisation and digitisation influencing the future, the opportunities for the finance profession have never been greater in helping promote growth and prosperity in the global economy. Yet adding to the equation the ambitions of today's young workforce, the stakes for the attraction, engagement, development, and retention of the youngest generation in the profession today are high. It is therefore important that governments, central banks, ministries of finance and education understand how to develop a pipeline of talent, with the right behaviours necessary for a sustainable financial services sector.

School students

Though many students will not formally choose their careers until the age of 16 upwards, it is absolutely necessary that younger students are included as part of any policy development. This is for a number of reasons: the first is to ensure greater understanding and inclusivity of young girls in science, technology, engineering, and maths (STEM) subjects. The second is that as financial services become more accessible through companies, such as, goHenry,[2] a pre-paid pocket money card and App ensuring that young children understand the fundamentals of money and technology, learning how they interact, what the true purpose is and how to remain responsible. The last point is to ensure that children understand how to stay safe when using technology, whether it is using social media, shopping online or understanding cyber security (for example, Barclays LifeSkills).[3] Leading financial companies through corporate social responsibility programmes may wish to work with local communities and schools to support coding clubs and work experience, especially for low income families.[4]

Universities

There are a number of challenges which governments will have to address when considering both international growth and digitisation of economies. Firstly, when looking at core business and finance qualifications, it is important to have industry participation in setting the curriculum to help prevent graduates qualifying with outdated knowledge. The closer these can be aligned with international standards, the greater support they will provide to those working with foreign investors.

Aside from specific financial qualifications, it is important to ensure there is high-level participation in STEM subjects at university level, including from underrepresented groups of society (women, ethnic minorities, lower income backgrounds). Computer sciences and financial mathematics are traditionally focussed on, but subjects like quantum computing, data analytics, and AI are rapidly growing in importance. The government and universities need to be constantly communicating with the financial services sector to understand what challenges lie ahead.

Professionals

In traditional financial professions, such as accountancy, continuing professional development is highly important in staying relevant. As technology develops and industries inevitably become more automated, professionals need to upskill, either in specific technical areas, or in complementary areas to ensure they are able to work with and understand new technologies, as well as understand the regulations surrounding them. The ACCA's Professional Insights team produces a number of reports to support governments, regulators, and members in remaining aware of developments in technologies, such as FinTech, blockchain, AI, and cyber security.[5]

[2] GoHenry, (March 2018) available at: https://www.gohenry.co.uk/
[3] Barclays LifeSkills, (March 2018) available at: https://www.barclays.co.uk/digital-confidence/lifeskills/
[4] Digital Horizons, (March 2018) available at: https://digitalhorizons.org.uk/about/
[5] ACCA, Technology research from professional insights, (March 2018) available at: http://www.accaglobal.com/uk/en/professional-insights/technology.html

It is also important to recognise the requirements of those outside of the workplace, to ensure they are able to utilise the technological developments coming from the financial services sector. The traditionally un-banked, elder generations, community organisations and others are all participants in the ecosystem, and so it is vital to ensure they are able to understand and access exactly the same services as others.

Drivers of change

Beyond technology, there are a number of drivers of change that must be considered when planning for the future. Today's workforce has ever increasing expectations for global mobility; for creating social and public value; and for opportunities to innovate. Skills aside, performance is becoming increasingly dependent on key behaviours beyond technical expertise.

The ACCA's 'Drivers of Change and Future Skills' report describes the seven quotients needed for success:

- **Technical and ethical competencies:** The skills and abilities to perform activities consistently to a defined standard while maintaining the highest standards of integrity, independence and scepticism.
- **Intelligence:** The ability to acquire and use knowledge: thinking, reasoning and solving problems.
- **Creativity:** The ability to use existing knowledge in a new situation, to make connections, explore potential outcomes, and generate new ideas.
- **Digital quotient:** The awareness and application of existing and emerging digital technologies, capabilities, practices, strategies and culture.
- **Emotional intelligence:** The ability to identify your own emotions and those of others, harness and apply them to tasks, and regulate and manage them.
- **Vision:** The ability to anticipate future trends accurately by extrapolating existing trends and facts, and filling the gaps by thinking innovatively.
- **Experience:** The ability and skills to understand customer expectations, meet desired outcomes and create value.

Furthermore, investors are demanding greater transparency and ethical standards applied to their companies. And in a world where business models are transforming towards lighter, more digital structures, it is important that ethical principles are embedded to ensure a system which is both safe and sustainable. The ACCA's report, 'Ethics and Trust in a Digital Age',[6] reinforces the importance of strengthening ethical behaviours and standards in the financial services sector, especially as the risk of cybercrime increases.

[6] ACCA, 'Ethics and trust in a digital age', (September 2017), available at: http://www.accaglobal.com/content/dam/ACCA_Global/Technical/Future/pi-highlights-ethics-trust-digital-age.pdf

REACHING THE POOR:
IS FINTECH A FIX FOR FINANCIAL EXCLUSION?

Chartered Institute for Securities & Investment (CISI)

'Reaching the poor: The intractable nature of financial exclusion in the UK', a recent report by think tank the Centre for the Study of Financial Innovation (CSFI), asked whether FinTech can provide a helping hand to the poor. It found that it almost certainly can.

This is a broad-brush review of recent progress in financial inclusion, and of the problems that remain. Dr Andrew Hilton, the Centre's Director (and a former World Bank economist), says:

"My own take-away is that, for all the genuine progress that has been made (and it should not be minimised), there remains an intractable problem of how to deal with the least advantaged, most excluded people in society – those who are not just unbanked, but perhaps unbankable. In that sense, the (very) poor will be 'always with us' – but we can at least chip away at the edges of the problem, and improve conditions and prospects for those who are one or two steps up the ladder of financial inclusion."

Much of the groundwork was laid by England's Christian leader, the Archbishop of Canterbury who, when he was Bishop of Durham, personally funded a preliminary study into how the country's network of churches could be used to build a new form of credit union infrastructure. Regarding Britain's work in this area Sir Hector Sants, former head of the Archbishop's task group on responsible credit and savings, and also a distinguished investment banker who was formerly head of Britain's investment regulator, says:

"The importance of maintaining momentum in addressing the challenges posed by financial exclusion has never been greater… However, although the importance of having an inclusive finance sector is widely recognised, there remain some critical areas of debate where a consensus has yet to be formed."

Harry Atkinson, who runs a major open banking programme at Nesta – a think tank chaired by Sir John Gieve, former deputy governor of the Bank of England – asks the question, can FinTech offer a solution?

The term FinTech does not just mean financial technology, he reminds us:
"After all, financial technology has been around since the days of barter. What the current buzzword tries to describe is the many new initiatives in the delivery of banking, investment and payments through an evolving mix of software, the internet, Big Data, machine learning, etc, through personal devices and other innovative channels. So, what can FinTech (as defined above) do for the financially excluded?

That question, when directed towards consumers in emerging economies, has attracted substantial interest from social entrepreneurs, international development agencies, financial institutions and telecoms companies. However, the issue has so far attracted less attention here in the UK – few FinTech entrepreneurs are developing products aimed primarily at the financially excluded."

That said, he believes there is considerable potential in both the short and long term, and that comes in two forms. He identifies possible 'moonshots', such as open banking and platform banking. Then, 'back to earth' he sees great short-term potential in easier fixes in areas such as credit scoring, particularly for those relatively unknown to the financial sector, with 'thin files' in savings and insurance.

"It is far too early to draw any firm conclusions about the implications of FinTech for financial exclusion," says Mr Atkinson. "But the potential is clear. A financial exclusion strategy that does not factor in emerging financial technologies is at risk of becoming quickly outdated."

UNLOCKING THE POTENTIAL OF FINTECH

The Institute of Chartered Accountants in England and Wales (ICAEW)

The potential of FinTech is much discussed, and much hyped. Technology has a key role to play in transforming financial services, from regulatory reporting, to encouraging saving and easier and faster payments. Often overlooked amidst the hype is the role technology can play in improving financial inclusion. The four elements of inclusion – access to payments, credit, insurance and investment – are all being disrupted, and while innovation presents us with new platforms and services (often manifest as better functionality at a lower price) there is space to target overlooked segments of the market, such as the two billion people worldwide who do not have access to a bank account. It is here that technology will make the greatest difference.

A further example is the potential of the financial technology of blockchain, which will bring a foundational change in how financial records are created, kept and updated. Rather than having one single owner, blockchain records are distributed among all their users. The genius of the blockchain approach is in using a complex system of consensus and verification to ensure that nevertheless (even with no central owner and with time lags between all the users) a single, agreed-upon version of the truth propagates to all users as part of a permanent record. This creates a kind of 'universal entry bookkeeping', where a single entry is shared identically and permanently with every participant. This concept has the potential to further financial inclusion globally.

Working in partnership

Financial regulatory expertise and experience differs between any two countries. By working together, governments and regulators can share expertise, experience and innovations so that both countries benefit and the potential of FinTech can be unlocked and realised. A range of aspects for such cooperation were discussed in UK-Russia FinTech Working Group meetings. One key challenge highlighted is finding the right level and form of regulation to nurture FinTech while managing risks and protecting investors and the public. Another challenge is identifying and delivering the right education for all ages to foster financial inclusion, and at the same time equipping current and future FinTech innovators with cross-discipline skills and education.

As a leading educator of finance professionals in the UK and globally, ICAEW has worked in close partnership with counterparts in many countries to jointly build capacity and to deliver tailored training and qualifications. ICAEW emphasises that local institutions' knowledge and expertise must be the starting point of any successful partnership.

THE JOURNEY TO UK OPEN BANKING:

AN EY PERSPECTIVE FOR THE UK-RUSSIA FINTECH WORKING GROUP

EY

EY has been involved in the UK open banking initiative since its origins in the HM Treasury open-data initiatives, competition enquiry and the creation of the 'Open Banking Working Group'. EY-Partner, Imran Gulamhuseinwala was appointed the 'Open Banking Implementation Trustee' with oversight of the Open Banking Implementation Entity (OBIE) and application programming interface (API) standards. EY has supported various aspects of the OBIE process.

The UK-Russia FinTech Working Group dialogue has explored the origins of UK Open Banking through to the most recent launch. This UK journey is set out below. While a similar Russian journey would not be as long the key elements will need to be addressed (Developing an overall market framework across the legal, operational design and implementation process, Executing a multi-stakeholder detailed design process and managing the sequential releases of Open-APIs, Post-launch monitoring and improvement. The UK's journey timeline is set out below.

Once enabling legislation was in place in 2016 a major programme proceeded that developed standard processes and defined APIs, built the limited central infrastructure and put in place processes for regulatory authorisation, dispute resolution and communications. At the heart of this process it is important to highlight the extensive consultation process, intense focus on achieving the desired consumer benefits and experience with an extensive customer research programme and particular focus on key issues of security, liability and other risks.

Timeline: four year journey to UK Open Banking

	2015	2016	2017	2018
Key policy-related actions	• HM Treasury launched Call for Evidence. • Requested insights & perspectives on how an Open API Standard in UK Banking could be delivered. • Responses from consumer groups, banks, payment institutions, FinTechs and wider technology players. • BBA, Payments UK, EY and Innovate Finance assist HM Treasury in establishing the Open Banking Working Group.	• OBWG published Open Banking Standard Framework. • Received public endorsement from HM Treasury. • CMA adopted recommendations from the OBWG, aligning to their Competition Inquiry. • CMA announced intention to legislate and engages in industry consultation. • CMA drafts an Order mandating Open Banking.	• CMA requests 'CMA-9' (i.e. the 9 largest banks compelled to comply with the Open Banking Order) stand up and fund an Implementation Entity, tasked with developing Open Banking API specifications. • Implementation Entity is established with an Implementation Trustee (i.e. exec chair) appointed to deliver Open Banking by 2018.	• In January 2018 all regulated companies started integrating with Open Banking and could test. • In February the UK launched Open Banking operationally. • From March 2018, consumers and small businesses across the UK can start to make the most of a dynamic new range of financial services.
Milestones	• HM Treasury closes an industry-wide consultation. • HM Treasury establishes the Open Banking Working Group. • Open Banking Working Group (OBWG) finalises the 'Open Banking Standard Framework'.	• OBWG publishes the 'Open Banking Standard Framework'. • CMA legislates Open Banking transposing OBWG recommendations into a legal order.	• CMA establishes the Implementation Entity (with bank funding). • Implementation Entity publishes specifications for Open Data and Read/Write APIs.	• The UK is the first nation in the world to launch Open Banking.

Customer research underpinned design and providing non-statutory guidance to enable industry wide strong starting standards

- **Beyond specifications OBIE has commissioned research with customers (personal and small business).**
- **Provides basic level evidence based guidance on design of interfaces and customer journeys.**
- **Aims to establish baseline 'best practice' and good conduct to maximise consumer uptake.**
- **Also ensures alignment of standards and technical flows with requirements of high quality customer experience.**
- **In addition FCA has invested in OB Sandbox competition to stimulate early innovation on new platform.**

In the UK it was determined a very light central utility technology infrastructure will be required going forward. Initially provisioned by the OBIE, this is likely to transition to other entities for long term operation. This infrastructure (set out below) enables an ecosystem only accessible by players authorised by UK and EU-27 regulators.

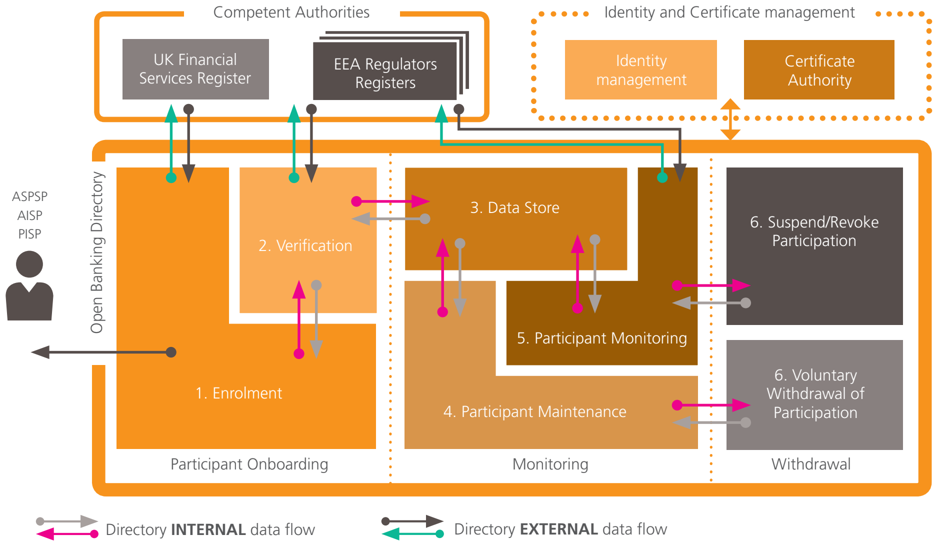
Overall the UK-Russia dialogue on Open Banking has indicated many features of the UK process and design that can be applied or adapted within the Russian market. However we see several key learnings:

- A clear market wide rationale – a so called 'burning platform' – is needed, combining growth, competition and regulatory drivers. We anticipate that an extensive scope of APIs beyond basic services is critical to enable sufficient adoption and innovation.
- Customers, security and risk need to be at the heart of the process to ensure adoption, consent from critical stakeholders and the integrity of the final design.
- Extensive granular expert consultation was essential to bring forward many small but critical issues and resolve rapidly – with a clear ultimate unambiguous design authority.
- Critically players need to understand the strategic, regulatory and technology implications from the board down to ensure adequate execution and investment in innovation.

Implementation through standards, light central infrastructure and most development to provide open APIs within players IT domains

Key:

- Account Servicing Payment Service Provider (ASPSP) – referencing custodians of consumer data – e.g. Banks.
- Account Information Service Provider (AISP) – referencing 3rd parties accessing Open Banking APIs for data access.
- Payment Initiating Service Provider (PISP) – 3rd parties accessing Open Banking APIs for payment initiation access.



THE NEW PAYMENTS LANDSCAPE

SWIFT

The payments industry faces immense pressure on multiple fronts. Waves of technological advances, regulatory scrutiny, and changes in consumer and client behaviours and expectations, are all breaking on the shores of a once staid and relatively unchanging business. While the challenges are many, there are signs that the industry is facing them head-on, developing a new, more innovative and dynamic payments landscape.

The disruptive forces the industry faces are coming together in a short timeframe and within a cost-contained environment.

Consumers want their retail experience to be replicated in the banking world; this means instant, frictionless services. At the same time, corporate clients want to reduce payment costs and are entering new trade corridors; they also want transparency, predictability and timeliness of payments.

Regulators have weighed in on consumers' behalf, promoting new products and services through open banking regulations that pave the way for new, non-bank institutions, along with financial technology companies to enter the payments market. The wider post-crisis regulatory push means compliance is taking up more of payments professionals' time. Data privacy (via GDPR), security and resiliency are key concerns.

In particular, managing financial crime compliance requirements and addressing the cyber threat in the high speed world of real time payments is becoming ever more challenging. Dealing with these threats at a community level is the only way to protect the financial ecosystem.

Finally, technological advances are bringing into play powerful and flexible new capabilities such as AI and distributed ledger technology. In many cases, the new entrants have been more adept at harnessing such technologies – in proof of concept, at least – than the payments market incumbents.

Payments actors must keep up with the pace of change and prepare for the future to remain competitive in such a rapidly evolving landscape.

The industry response: correspondent banking is being revolutionised

Historically, cross-border payments have been relatively slow, lacking in transparency and suffered unpredictable fees. The imperative to improve customer service in the cross-border space brought leading banks together with SWIFT to create the global payments innovation (gpi) initiative. Objectives from the outset have been to deliver same day use of funds, transparency of fees, end-to-end payments tracking and the unaltered transfer of remittance information.

Live since January 2017, more than 145 transaction banks have signed up to the service, with more than 40 using SWIFT gpi to exchange hundreds of thousands of payments a day, in over 200 country corridors. SWIFT gpi

Challenges for the Payments Industry

Many disruptions coming together in a short timeframe and cost-pressured environment

NEW CONSUMER BEHAVIOURS & NEEDS

- Y, X generation (NOW!)
- reduction of cash usage
- more payments
- cross channel view
- payments methods re-definition (API, internet based, contactless…)
- expectation for 'frictionless'
- demand for more security.

TECHNOLOGY CHANGES

- mobile, wallets, cryptocurrencies
- DLT & AI
- platform/Architecture renewal
- biometrics (e.g. facial recognition)
- cybersecurity.

REGULATORY PRESSURE

- compliance
- data privacy (e.g. GDPR)
- open Banking (e.g. PSD2)
- resiliency.

INDUSTRY TRENDS

- cost reduction pressure
- new trade corridors
- ISO 20022 adoption
- instant Payments
- GTB business evolution: transparency, predictability and timeliness
- competition from non-FIs & Fin/Reg Tech
- faster pace of change
- addressing fragmentation and interoperability issues.

is revolutionising cross-border payments by increasing their speed from days to minutes and even seconds. Nearly 50% of gpi payments reach the beneficiary in less than 30 minutes. As a result, bank clients benefit from shorter supply cycles, goods are shipped faster, less liquidity is used, and there are far fewer enquiries and resulting costs.

Gpi also addresses key corporate treasury concerns, including lack of transparency. The gpi Tracker gives the status of cross-border payments in real time and enables banks to review information about each bank in its path and any fees that have been deducted. This information is then passed on to corporate clients, offering a data-rich experience with greater levels of visibility into each payment and their overall liquidity. The Tracker is accessible via APIs, which enable banks to embed the Tracker information into their payment flow applications and front-end platforms. As a result, corporate treasurers can track gpi payments in real time.

Faster payments coming faster than expected

Australia is the latest market to go live with real time. The recently launched New Payments Platform (NPP) has been designed to remove inefficiencies and improve how consumers, businesses and government departments transact with one another. Key features of the NPP include 24/7 real-time, line by line settlement via the Reserve Bank of Australia's Fast Settlement Service; PayID, a way to link a financial account with an easy to remember identifier, such as a mobile phone number or email address; an open access platform to encourage innovation through competition; and overlay services that will provide new value services to Australian consumers, businesses and government.

NPP was developed collaboratively by 13 Australian banks or authorised deposit-taking institutions, and will provide the basic infrastructure to connect these financial institutions, and through them businesses and consumers. SWIFT helped to design, build, test and deliver the NPP and will play a key role in operating the infrastructure for the NPP.

Many of the components from NPP will be part of SWIFT's ongoing instant payments strategy to ensure 24/7, instant, high-volume, low latency services. For example, SWIFT is developing an instant messaging solution that will provide connectivity to EBA Clearing's RT1 instant payments system and the Eurosystem's TARGET Instant Payments Settlement (TIPS) service. In addition, SWIFT is working with other clearing and settlement mechanisms to ensure participants are given the choice of a SWIFT channel on the largest number of markets. SWIFT's offerings in Europe will go live in November 2018. SWIFT's evolving portfolio already allows users to connect to other instant payments systems such as TCH's in the US and the Faster Payment System's in Hong Kong.

The future: cross currency, instant payments?

Moving on from cross-border but single currency instant payments in the euro area, cross-currency instant payments will not happen on day one of any new instant payments system. In addition to the challenges on the technical and operational levels, there are also business challenges and foreign exchange (FX) requirements. Banks and central banks will have to agree how cross-currency instant payments can be exchanged, processed, guaranteed and settled.

Putting aside the FX element, there are interoperability challenges that are related to market practice and preferences. Once systems are linked, those differences will have to be considered. For example, there is no standard definition of how instant an instant payments system will be; it ranges from five to 20 seconds. If you hook up a five-second system to one that clears in 20 seconds, there will be payment fails.

There are some tough decisions ahead for different payments communities, and collaboration and harmonisation will be crucial. Part of SWIFT's core mission is to help communities come together to define these standards and market practices. SWIFT gpi is an example of how existing networks can be revolutionised to deliver this high speed future.

As a result of all the changes that are underway, industry players are faced with a myriad challenges. Not only do they need to find solutions – they must also create opportunities. In the new payment landscape, a delicate balance of harmonisation, innovation and collaboration will be key.

DIGITAL CASH: THE MISSING 'BIG BEAST' OF DIGITAL PAYMENTS?

Tibado

Physical cash – the notes and coins we carry around in our purses, pockets and wallets – is a familiar part of the fabric of everyday life. If we look back to the middle of the twentieth century, physical cash was the dominant means of payment when things were bought in shops – so-called 'spontaneous payments'. Cheques also existed but cash was the king of the point of sale.

Since then, the advent of a range of innovative payment services has seen the introduction first of payment cards and latterly of an array of online payment methods. Cash continues to play a central spontaneous payments role in some countries, e.g. Germany, whereas in Sweden, the use of cash has fallen to such low levels that many Swedish shops only accept non-cash means of payment.

It is tempting to conclude from the evidence that it is just a matter of time before cash dies away completely. There is, however, the possibility that another chapter is about to be written in the story of cash – digital coins.

Introducing digital cash

It is important to distinguish between cryptocurrencies on the one hand and fiat digital cash on the other. Cryptocurrencies, including Bitcoin, Ripple, Ether, etc. are uncollateralised instruments and are not linked or tied to any nation state currencies. Fiat digital cash, on the other hand, is the representation of fiat, or nation state cash, in digital form.

This article is only about fiat digital cash – in other words, digital dollars, pounds, euros, etc. The idea behind fiat digital cash is that it would be issued and managed by fully authorised institutions and collateralised so that the digital coins in circulation are backed up by bank account sight deposits, or whatever other collateral strategy the digital coin issuer is allowed to pursue.

The only fundamental difference between physical cash and digital cash is the technology or 'form factor' from which the cash is created. Physical cash is notes or metal coins, a digital coin is a small digital data file.

DEFINING FEATURES OF CASH

Cash stands apart
Unlike money in a bank account, on PayPal, or on your Oyster card, cash exists on its own, unconnected to any accounting engine.

It's a bearer instrument
When you hold cash, you are deemed to be the rightful owner of that cash, with the power to spend it without recourse to any third party.

It delivers instant finality
If you hand someone some cash, you have just done all the authentication, authorisation, clearing and settlement that's required. The new holder can immediately use the cash received in a wholly unrelated transaction. There's no impediment to it being able to be further transferred.

You're in control!
When you have cash, you're in charge of that value. You don't have to tell anyone you're spending it, you're in complete control.

It's private – no one else needs to know about your transactions
Cash stands apart because the holder is in sole control of it, there's no need for any other person or entity to know anything about the use to which it is being put.

It is typically transferred free of any transaction fees
When you give someone a note or some coins, they get every penny, cent or rupee.

There have been several designs for fiat digital cash since David Chaum's first design (i.e. Digicash) in the 1980s, with each design having its own unique features. The following section focuses on Tibado design to discuss key features of a digital currency.

Key features of a digital cash approach

The Tibado design is based on the creation, in a secure computing environment, of digital coins. These coins are issued to purchasers and a partial copy is held on a central 'Live Coin Database' within a system called the 'Cash Box'. To spend some digital cash, the coin holder instructs the Cash Box to split their coin into two new coins:

- one for the amount required for the purchase
- one for the remainder.

The sender then remits the coin for the purchase to the receiver.

The receiver takes the coin sent by the payer and instructs the Cash Box to merge the received coin with their existing coin, if they have one. Both these coins are checked and then discarded by the Cash Box, which then creates a new coin for the combined amount.

A piece of software called a 'pocket' is used to provide users with:

- An easy way to send these split and merge instructions, along with their related coins, to the Cash Box.
- A way to achieve instant finality, through the creation of brand new coins that involved checking that their coins were indeed unspent.

The Cash Box works on the basis that the first message presenting one or more coin(s) back to it is assumed to be from the rightful owner of those coin(s).

What problems does fiat digital cash solve?

It will only make sense to recreate cash in digital form if the product solves real problems for society. It is almost a truism that any new product is a solution looking for a problem but it's equally true that new products fail when they don't find problems to solve. Fiat digital cash solves a number of substantial, real problems and a selection of these are set out below.

Transforming the distribution of physical cash
Physical cash is expensive both to manufacture and to distribute. Banks are often put under pressure to retain costly branch and cash dispenser networks, so that all in society can enjoy convenient access to cash. At the same time, consumers are increasingly moving to 'e' and 'm' commerce, using those branches and cash machines – and even cash itself – less and less. Imagine a cash dispenser app on your phone. It would enable you to take money out of your bank account in the form of digital coins. These coins could be swapped out for physical cash at any outlet that was willing to do the swap. The outlet would be generating footfall and getting rid of physical cash which they often find to be expensive to protect and handle. The customer would be accessing physical cash when and where they wished. Unlike with retailer cashback today, there would be no fees for the retailer to pay to the bank because there's no bank involved in the transaction.

Transforming financial inclusion in a digital economy
With digital cash, all you need is a mobile or a laptop and you're included. You can be sent a digital coin by anyone and you can hold it in your 'pocket' app. At online stores accepting digital cash, you can pay immediately, with the store benefitting from instant finality.

Giving consumers new financial management choices
Before retail banking became a mass market product, many people used physical cash to manage their lives, sometimes using jampots on mantelpieces to separate their cash wages into money for the rent, for coal, for food and for 'everything else'. It would be very straightforward

to adapt payroll software to pay staff directly in digital cash. Your pocket app could then automatically send out the rent and utilities money you owe and give you sophisticated money management tools with which to look after 'everything else', all without any bank involvement. Retail banking would still remain a huge industry, just not quite so big or so invasive in people's lives. Market economies thrive through consumers having and exercising choice – digital cash would give consumers back the choice of whether or not to have a bank account.

Reducing frictional costs in retail payments
With digital cash retailers would receive every cent or penny with no fees. They wouldn't even need to deposit their digital cash into the bank – they could instead pay it away down their supply chain, just as they used to in the days of physical cash.

Transforming the remittances and travel money markets
Digital cash is just cash in digital form. Imagine an online Bureau de Change. You send it a digital coin in one currency and it sends you back a coin in another. It's exactly the same transaction you would do in an airport booth, except there's no booth or teller, just an app on a website. The fees and spreads should be very low and the service should operate 24x7, globally. That should do away with high transaction charges for sending money home, as well as cash dispenser fees for taking out money abroad.

Oiling the wheels of global commerce, the internet of things and smart contracts
It's not easy to decide when to extend credit to a customer in a B2B context, especially when you're running a global online business. The instant finality available from digital cash will give businesses the ability to trade, risk free, with any counterparty. If you get paid in digital cash and 'pocket' the coins you receive, you have achieved finality and can then release your goods – or provide your services – immediately.

Bringing digital cash to market

The natural institutions to bring fiat digital cash to market are those institutions that today issue physical notes and coin. These are typically central banks or mints, normally operating as monopoly providers from within the public sector of the economy. There is a set of risks and issues to be managed in any new product development and a digital cash launch would be no different. Small scale experimentation is likely to be an important risk mitigator in any launch programme, so that these institutions can see what works and what doesn't before scaling up to a full implementation.

New product developers often talk about learning to crawl, then walk, then run. Crawling in this space might involve single industry B2B trials, or local implementations of swapping digital cash for physical. Walking might be financial inclusion programmes linked to a small number of major retailers accepting payment in digital cash. Running might be remittance and travel money solutions, as these will often require a digital cash service to be in existence in both the sending and receiving country.

Conclusions and next steps

Fiat digital cash is ready for deployment now and has the potential to address a series of substantial problems that exist in today's payment markets. Many central banks have central bank digital cash (CBDC) programmes in place and, whether it is through the Tibado design or some other approach, it will soon be time for these programmes to move to the next step of trial and experimentation. Only then will society be able to begin to realise the benefits set out in this article. One day, we might well look back and say: 'The digital economy only matured and became real when it embedded digital cash'.

INITIAL COIN OFFERINGS: A REGULATORY OVERVIEW

Freshfields Bruckhaus Deringer LLP

During 2017, ICOs emerged as alternative means of raising capital, raising nearly $4bn during the year. They offer the potential to raise significant capital with less complexity and fewer administrative burdens than the traditional venture capital or IPO process. This article considers what ICOs amount to in legal terms and how they are being treated by regulators.

What is an ICO?

An ICO is a digital means of raising funds from the public within a limited period of time by issuing a coin or token that is related to a specific project, business model or business idea. The tokens are typically created and disseminated using distributed ledger or blockchain technology and may be tradeable on specific platforms.

In legal terms, tokens are generally contracts granting certain rights to investors. The nature of those rights varies across ICOs. Depending on their design, tokens may represent a voucher for a one-time or recurring service provided by the issuing enterprise or a right to participate in a share of the returns generated by the enterprise. However, some tokens may have no discernible intrinsic value or grant no rights at all.

Under an ICO, the issuer or offeror offers tokens for sale in exchange for fiat currency such as dollars or euros, or more often, for a virtual currency (e.g. Bitcon or Ether). Typically, tokens are bilateral arrangements which are not issued in the form of a security, certificate or similar type of transferable security, although some tokens, depending on their structure, can be traded on exchanges specialising in such transactions.

What is the legal nature of a token?

The answer across a range of jurisdictions seems to be: 'it depends'.

As mentioned above, a token may entitle the holder to a right to participate in the returns generated by the issuing enterprise. In this case, it is likely to be regarded as a type of security or unit in a collective investment fund. In an investigation in Summer 2017, the Securities and Exchange Commission (SEC) found that tokens issued in an ICO by a virtual venture fund called the DAO were securities, applying the test in 'Howey' under which investment contracts (a type of security under the US Securities Act) are defined as an investment of money in a common enterprise with an expectation of profits derived solely from the entrepreneurial or managerial efforts of others. The Monetary Authority of Singapore and the Hong Kong Securities and Futures Commission have indicated that tokens representing shares in companies or entitlements to profits arising from a portfolio of shares are likely to be regarded as shares or units in a collective investment scheme. Within the European Union, tokens of this type could be financial instruments within the scope of the Markets in Financial Instruments Directive (and transferable securities within the scope of the Prospectus Directive) or units in an Alternative Investment Fund within the Alternative Investment Fund Managers Directive.

Where tokens fall within an existing category of regulated financial instruments, they will be subject to the regulatory framework in the same way as other instruments falling within the same category. Accordingly, a prospectus is likely to be required for an ICO of tokens that are characterised as securities, unless the offering is structured to take advantage of a relevant exemption, for example, by being offered only to qualified investors. The intermediaries providing the platform by which the offering is made and the operator of any platform on which tokens are traded are also likely to need authorisation and would be obliged to apply anti-money laundering due diligence procedures in relation to their clients.

However, where a token entitles the holder to a right to receive a service from the enterprise or to participate in it (a so-called 'utility' token), the legal characterisation of the token is less clear. In these cases, the token may simply amount to a contractual entitlement that does not fall within any category of regulated financial instrument. Many ICOs have accordingly been conducted on the basis that they are not subject to regulation, with a 'white paper' rather than an approved prospectus being prepared to describe the offering and the offering not being made through authorised or licensed intermediaries. Regulators have acknowledged that these types of ICO may not fall within the regulatory perimeter and that they may not have jurisdiction over them.[7]

How are regulators responding?

ICOs tend to be carried out by enterprises at an early stage of development whose prospects are highly uncertain. The tokens issued often experience extreme price volatility and enjoy low levels of liquidity. They may also be highly susceptible to cybercrime (for example, the DAO scheme mentioned above lost approximately $50mn of investor funds when its system was breached by a hacker) and digital currencies or tokens lost due to fraud are very difficult to recover. Offerings may be directed at retail as well as professional or experienced investors. Furthermore, the 'white papers' describing proposed schemes have not needed to comply with minimum disclosure standards. Unsurprisingly, regulators have been concerned about the potential for harm to unsophisticated investors.

Regulators have voiced their concerns in a number of statements and warnings to investors.[8] As mentioned above, many regulators have conceded that utility tokens may well fall outside the perimeter of regulation. Nevertheless, where a clear potential for consumer detriment has been identified, it seems unlikely that they will permit such a situation to continue in the medium to long term.

Two broad types of response are possible. The first is to test the boundaries of existing legislation and regulation and to treat ICOs are regulated products within the existing structure. This is the approach that is increasingly being taken in the US, where enforcement action has been brought even in relation to ICOs purporting to issue 'utility' type tokens.[9] Issuers may face difficulty convincing the SEC that their token is solely a 'utility' token where investors buy tokens not merely for their utility but in the hope that their value will appreciate and they will be able to sell the token at a profit on the secondary market. Indeed, the Chair of the SEC has indicated in a public statement that by and large the structures of ICOs he has seen directly implicate the provisions of federal securities laws.

Even if a token cannot be treated as a 'security' or 'financial instrument' within applicable legislation, it may constitute another category of regulated investment. Tokens may themselves be regarded as a digital representation of value that can be transferred, stored or traded electronically and hence as a virtual currency. Where issued in return for fiat currency, they could (depending on their structure) amount to electronic money. In the United Kingdom, the concept of a 'collective investment scheme' is notoriously broad[10] and it is conceivable that it could include certain types of utility ICO where the value of a token is liable to increase in line with the success of the enterprise.

[7] For example, the Monetary Authority of Singapore indicated in its November 2017 Guide to Digital Token Offerings that a utility-based offering will not be subject to any requirements under the Securities and Futures Act or the Financial Advisers Act. The UK FCA indicated in its consumer warning on ICOs issued in September 2017 that most ICOs are not regulated by the FCA and the European Securities and Markets Authority (ESMA) indicated in its November 2017 statement that, depending on how they are structured, ICOs may fall outside the regulated space. Most recently, the Swiss Financial Market Supervisory Authority (FINMA) indicated in its February 2016 guidelines that utility tokens would not be treated as securities provided that their sole purpose is to confer access rights to an application or service and that they can be used for this purpose at the point of issue.

[8] Examples are various investor alerts issued by the SEC and the public statement issued by the Chair of the SEC in December 2017, the FCA consumer warning in September 2017, the ESMA alert to investors in November 2017 and the Hong Kong Securities and Futures Commission warning of February 2018.

[9] On 11 December 2017, the SEC issued a cease and desist order against Munchee, an ICO sponsor planning to issue tokens to the public.

[10] "Any arrangements with respect to property of any description, including money, the purpose or effect of which is to enable persons taking part in the arrangements (whether by becoming owners of the property or any part of it or otherwise) to participate in or receive profits or income arising from the acquisition, holding, management or disposal of the property or sums paid out of such property or income" (section 235, Financial Services and Markets Act 2000).

The second type of regulatory response would be to create a new category of regulated investment in order to bring ICOs within the regulatory perimeter. Regulators have to date been reluctant to take this approach, although regulators in some jurisdictions (China and South Korea) have banned ICOs outright. However, legislating to regulate ICOs appears more likely to the extent that a consensus emerges that a significant body of existing ICOs are not within the scope of existing regulatory regimes. There have been some recent indications of a move in this direction. For example, in December 2017 the FCA announced that it was undertaking an examination of the ICO market to determine whether there is a need for further regulatory action. In February 2018 the finance ministers and central bank governors of France and Germany wrote a joint letter to their counterparts in the other G20 jurisdictions suggesting that guidelines for further action should be put in place by July of this year.

Faced with the possibility of increased regulatory intervention, the industry may itself decide to take voluntary self-regulatory measures. These could involve, for example, promulgating standards of disclosure for 'white papers' – indeed, more recent and substantial offerings have provided increased disclosure, including risk factors. Other voluntary measures could include applying anti-money laundering procedures and conforming to rigorous cyber-security standards. Trading may also gravitate to regulated trading platforms: platforms designed for trading virtual tokens have been approved as alternative trading systems by the SEC and registered as exchanges in Japan.

If the rate of growth of ICOs seen in 2017 continues in 2018, it seems inevitable that regulatory scrutiny will intensify and likely that regulators' tolerance for significant ICOs operating outside the regulated space will diminish.

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In a world where digital business continues to play an ever-increasing role in ever-increasing aspects of daily life, in particular in smart cities and for connected consumers, it has been a privilege to be a representative of the lawyer community within the UK-Russia FinTech Working Group. The latest innovations and concepts being discussed by the Group are nearing mainstream at ever increasing speeds and will require the presence of a robust and coherent multi-jurisdictional legal framework in order to function properly and legitimately once they become part of the everyday. This in turn will require the expert assistance of lawyers from various jurisdictions and disciplines in establishing such a legal framework, helping the digital business community operate and transact within this framework and ultimately to be able to resolve (by way of arbitration or otherwise) of any disputes, which will undoubtedly arise. Being at the forefront of discussions about this brave new world allows for a fascinating insight. I look forward to my continued participation in the work of this Group with the trailblazers involved in it.

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Artem Doudko, Partner, Osborne Clarke LLP

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TRANSFORMATION AND INNOVATION:

A GUIDE TO PARTNERSHIPS BETWEEN FINANCIAL SERVICES INSTITUTIONS AND FINTECHS

For the UK's established financial services institutions (FSIs), the importance of innovation for future success has long been recognised. This is reflected in the way in which the industry has set out in recent years to become a world leader in the adoption of FinTech. The drive to innovate will strengthen UK competitiveness and help to tailor financial services more closely to the needs of consumers in future.

Meanwhile, on the edges of the financial services sector, agile start-ups in the FinTech, InsurTech and RegTech sectors – referred to simply as FinTechs in this section – are innovating ahead of many of their FSI counterparts. The range of new ideas and pioneering technologies being explored and developed has the potential to overhaul how financial services are delivered, enhancing accessibility and consumer choice.

For both FSIs and FinTechs, collaboration will be a key component to future success. By combining their respective strengths, FSIs and FinTechs can not only secure their own future and provide superior service to their customers, but also help to secure the UK's position as a global centre of finance and financial innovation.

Many FSIs are already working with FinTechs, but there are often barriers that need to be negotiated for effective collaboration. FSIs are often tied into legacy processes and stringent regulations, and lack an established internal process for working with small, agile companies. On the other hand, FinTechs are usually working on much leaner, shorter lifecycles for decision making and product development, so they cannot afford to go through the complex processes required of established and regulated financial services' systems.

Key collaboration models and legal issues to consider

To smooth the journey to collaboration, this section outlines the common pain points for FSIs and start-ups from the point of view of choosing the right collaboration model, and highlights some key legal concerns. It outlines the first steps that FSIs and FinTechs should take when beginning discussions, and highlights ways successful partnerships can be made while avoiding these pitfalls.

By using these guidelines as a starting point, both FSIs and FinTechs can understand the issues faced by potential partners, and avoid the common setbacks that can derail otherwise promising collaborations.

For a more comprehensive version of the guide, please refer to 'Transformation and innovation: a guide to partnerships between financial services institutions and FinTechs' published by TheCityUK in collaboration with Santander and Shearman & Sterling.[11]

[11] 'Transformation and innovation: a guide to partnerships between financial services institutions and FinTechs' published by TheCityUK (20 November 2017), available at: https://www.thecityuk.com/research/transformation-and-innovation-a-guide-to-partnerships-between-financial-services-institutions-and-fintechs/

KEY CONSIDERATIONS

By working together, financial services institutions (FSIs) and FinTechs can combine their respective strengths to drive innovation and reinforce the UK's position as a global leader in the financial industry. This section outlines two key areas of consideration that FSIs and FinTechs need to agree upon: common legal concerns that have the potential to hold up projects, and the nature of the collaboration model itself. By having these discussions at the beginning of a project, both parties can ensure that their interests are protected while bringing their expertise together to innovate.

This section highlights seven possible ways in which to structure such a partnership (see box below). These permit for a varying degree of proximity between the two entities, and allow for leadership on certain aspects to be split, equally, unequally or to sit with one party altogether. It would also be possible for an FSI and FinTech to agree to a tailored partnership which amounts to a hybrid of those outlined.

On bringing these partnerships into practice, the section also identifies a number of key legal hurdles to address. These range from data protection and IP ownership, to risk allocation and costs control, and finally to exit mechanisms.

Deciding which model, or combination of models, outlined in the report to adopt, while having regard to the legal checklist flagged within, will help enable both parties to take the steps below. These should ensure that the two sides of the financial services ecosystem are getting off on the right foot and able to most effectively bring to market the many widely recognised benefits of FinTech innovations.

7 MODELS OF COLLABORATION

1. Application programming interfaces / sandbox
2. Hackathon / Entrepreneur in residence
3. Startup corporate accelerator
4. FinTech product sourcing
5. FinTech joint venture / venture builder
6. Corporate venture capital
7. Mergers and acquisitions

Recommendations for FSIs

- CREATE A PLAYBOOK FOR SUCCESSFUL FINTECH COLLABORATION
- PUBLISH A SET OF GUIDELINES FOR FINTECHS
- STREAMLINE INTERNAL PROCESSES
- CREATE A COLLABORATIVE CULTURE

Guidance for FinTechs

- UNDERSTAND THE LEGAL AND COMMERCIAL STRUCTURES ENTAILED
- ENSURE THE OTHER PARTY'S DATA AND SENSITIVE INFORMATION WILL BE SAFE
- COMPARE THE TECHNOLOGY INFRASTRUCTURES OF EACH PARTY
- KNOW THE SIZE AND COMPOSITION OF THE TEAM WHO WILL TAKE THIS FORWARD

CHOOSING THE RIGHT COLLABORATION MODEL

Application programming interfaces/sandbox

In this model, FSIs offer FinTechs limited access to some of their infrastructure or services through public Application Programming Interfaces (APIs), sandbox development environments, or anonymised samples of customer data. For the FSI, this represents a relatively hands-off approach to innovation, with FinTechs able to build and test new products and services without impacting the FSI.

Open APIs are becoming more common in financial services, particularly as 2018 will see the introduction of the EU's Revised Payment Service Directive (PSD2), which will allow banking customers to enlist third parties to manage their finances without leaving their existing bank.

An API or sandbox model will often not include a commercial agreement about how a product will be used, or who owns it.

Hackathon/Entrepreneur in residence

Hackathons are limited-time development events, where FSIs present a business or technology challenge and invite FinTechs to come up with a solution, often through a team that has formed specifically for the project.

Popularised in recent years by several high-profile success stories, hackathons focus on rapid innovation and fast prototyping to test early-stage concepts, rather than producing a polished product.

In this model, teams participating in the project are often given access to internal expertise and resources by the FSI, which can raise questions about intellectual property rights, particularly as solutions are co-created during these events. FSIs will need to establish how their own existing intellectual property can be used during the hackathon, and who ultimately owns the rights to products or services that are developed by FinTechs or entrepreneurs in residence.

Key considerations for application programming interfaces/sandbox

FSIs and FinTechs will need to set out guidelines around:

- intellectual property rights
- exclusivity
- development costs for everything produced within the API/sandbox structure.

Key considerations for hackathon/entrepreneur in residence

FSIs and FinTechs will need to set out guidelines around:

- intellectual property
- exclusivity
- data protection
- costs and control
- regulatory compliance.

Start-up corporate accelerator

This model usually sees many FinTechs submitting applications to FSIs for support with new products or services that they are already developing. By selecting a small batch of these applicants, an FSI can identify and capitalise on the most promising innovations, while the selected FinTechs gain access to expertise, support, and a captive customer base.

Corporate Accelerator programmes may operate on equity agreements, rather than simple collaboration, with the FSI usually taking a stake in the FinTechs it selects. That means FinTechs will need to ensure they are clear and comfortable with the amount of equity they are offering and the terms it is issued on. As shareholders will expect a higher level of control, governance rights and exclusivity than commercial partners, legal agreements will need to be made early in the process to prevent the FinTechs and FSI operating under different commercial models. Each side should be aware of the rights of the other under such arrangements and ensure they are documented upfront if necessary.

Key considerations for start-up corporate accelerator

FSIs and FinTechs will need to set out guidelines around:

- intellectual property
- exclusivity
- costs and control.

FinTech product sourcing

In this model, the product or service is already complete and market ready. An FSI will select a specific product developed by a FinTech company to test with limited sections of its customer base, either as a white-label or co-branded product. If this process is successful, the FSI then scales the use of the product to its entire business. This allows the FSI to easily trial new propositions and products without putting their own capital and development time into building them.

This is a commercial model, with each party sharing risk and growth opportunities without equity changing hands. However, issues can surface around intellectual property rights and exclusivity. FinTechs will need to understand upfront if entering into an agreement for the use of their product with one FSI will prevent them from also selling the product to other companies.

This exclusivity concern can affect the FSI, too. It will need to establish whether it is tied to a single provider, and assess the operational risks associated with relying on one product. As with most of these models, there are also discussions to be had about the legal ownership and control of intellectual property.

Key considerations for Fintech product sourcing

FSIs and FinTechs will need to set out guidelines around:

- exclusivity
- regulatory compliance
- data protection

FinTech joint venture/venture builder

Rather than hiring or acquiring an existing start-up, in this model an FSI sets up its own stand alone start-up to address a specific market niche. This company sits alongside its core business channels, and can have a separate branding.

By setting up this stand alone start-up in partnership with a FinTech or Venture Builder, FSIs are able to bring in specialised skills and investment, bolstered by shared equity.

The main legal concern for a joint venture is ownership and control of the new company. Questions around who will own the rights to any new products created and whether this agreement is exclusive will need to be settled at the outset. It's also vital that the stakeholders are able to agree on the value that will be given to technical expertise against financial investment.

Key considerations for FinTech join venture/ venture builder

FSIs and FinTechs will need to set out guidelines around:

- growth and risk
- exclusivity
- costs and control
- exit mechanisms
- intellectual property
- outsourcing rules.

Corporate venture capital

This model is one of the simplest. An FSI will take a minority stake in one or more up-and-coming FinTechs, in order to secure insider access to new innovations as they come to the fore.

As a straightforward investment, much of the legal considerations here are standard for large businesses. The FSI will need to assess the risk profile of the investment and the stability of the FinTech's value. Exclusivity, in this context, means establishing whether the service being developed will be provided solely to the FSI investor.

Key considerations for corporate venture capital

FSIs and FinTechs will need to set out guidelines around:

- growth and risk
- exclusivity
- costs and control
- exit mechanisms
- intellectual property.

Mergers and acquisitions

This is one of the most complex models, both practically and legally. Through mergers and acquisitions, FSIs buy out specific FinTechs to secure access to new innovations, or speed up strategic transitions.

Commercially, the key item is usually valuation. The FSI and FinTech need to agree on a valuation. An FSI will often acquire a FinTech when it has an established product but may lack a stable or clear track record, and have uncertain growth prospects. In these circumstances, there may be a valuation gap, which can be bridged by agreeing to deferred consideration, which is paid only when certain milestones are reached (known as an 'earn out'). This can also provide a useful incentive to selling owners to ensure that the FinTech is left in good condition, or to continue to grow the business.

Key considerations for mergers and acquisitions

FSIs and FinTechs will need to set out guidelines around:

- intellectual property
- risk and revenue
- additional investment needs
- employee agreements

Hybrids

It is possible for FSIs and FinTechs to agree to a tailored partnership framework, which will likely be a hybrid of the above models. This may provide for a greater degree of flexibility and could enable the partnership to reap a wider range of benefits. Naturally, this approach may conversely result in greater complexity and in an increased number of legal issues to consider and address. Over time some hybrids may become standardised, and could be easily replicated in copycat format by other firms. In practice, an FSI and FinTech can amalgamate a number of the models laid out in this report, and this process can be integrated into the rest of the business.

As FinTech continues to evolve and progress from its initial disruptive phase into a more mature and diversified market, the creation of new models should also be expected. Ensuring that a firm's business practices and legal structures are open and flexible to future innovation may help secure a competitive advantage in this high growth area.

Key considerations for hybrids

The list of key considerations will be a variation of those listed in the previous models, depending on the nature of the hybrid.

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