Fintech: the greatest opportunity since the smartphone?

An introduction to Fintech - and why London is the perfect “sandbox” for international Fintech start-ups, entrepreneurs & investors.

Gareth Davis
FITZGERALD & LAW

Fintech: the greatest opportunity since the smartphone?

CONTENTS

INTRODUCTION....3
Fintech Growth....3
Trends in 2016....4
Blockchain....4

THE RISE OF DIGITAL....5
Shaking up Payment Platforms....6
Cybersecurity: necessity & opportunity....7
The UK as the perfect "sandbox" for FinTech companies....8
What can we expect from 2017?....8

CONCLUSION....9
London's FinTech growth....9
Top 20 FinTech Gamechangers 2017....10

f&l fitzgerald & law

INTRODUCTION

It's no secret that smartphones (and the technology that comes with them) are a core component of modern life, leaving every business sector open to disruption. The Financial Services industry is no exception, with new technologies being woven into front end applications and back end processes.

The intersection between technology and finance is known as Fintech - and it's one of the fastest growing sectors in the world of developing technology.

In this whitepaper, we take a look at some of the trends shaping the future of Financial Services and the challenges and solutions confronting the sector.

Whether you're an investor, an existing Financial Services provider keen to understand the changing face of the industry, or an entrepreneur at the vanguard of the Fintech start-up movement, it's crucial to understand the transformative potential of this industry.

> Banks will have to adapt to new technologies, or die
>
> Vitalik Buterin
> Ethereum

FINTECH GROWTH

Back in 2008, global investment in Fintech was less than $1 billion but in 2015, global funding of Fintech start-ups alone totalled $12.2 billion. Although the US still captured the lion's share of this investment, Europe experienced the highest growth rate, with an increase of 215% to $1.48 billion invested. The UK and Ireland accounted for 42% of this total.

Because of the sheer size of financial institutions and the infrastructure supporting them, there has historically been a lack of enthusiasm for overhauling or even updating the technological foundations on which these institutions rely. Consider, for instance, the number of cheques which continue to be issued by insurance companies; the number of days it takes banks to process transactions; the challenges in obtaining a credit report.

This inertia has made the Financial Services sector - perhaps more than any other - ripe for disruption from technologically adept start-ups. Circle and Stripe are examples of Fintech start-ups that have already gained significant traction, pathing the way for other companies to further disrupt the industry.

2015 was in many ways Fintech's breakout year. As investment soared, newcomers started to break the dominance of Financial Services' largest players. Some, like Lending Club, were explicitly Fintech companies which grew to become household names and elsewhere, the likes of Apple and Samsung were waking up to the potential of the Fintech market - particularly in relation to smartphone technology.

> The US & Europe have 30 year old bill pay systems that are ripe for disruption
>
> Lou Anne Alexander
> Early Warning

TRENDS IN 2016

In 2016, customer-facing banking and financial services products have seen the greatest shake up. Cross-border payments have historically been a headache for small businesses and individuals alike, yet disruptors such as British TransferWise and Earthport have taken advantage of the shift from traditional high value, low volume transactions to low value, high volume transactions as individuals become increasingly willing to transfer funds internationally (as noted by Mike Massaro, CEO of FlyWire, at Money20/20 2016).

SECURITY

With the increasing willingness to trust online and mobile banking, comes an increase in vulnerabilities. Over $1 billion in funds was stolen through cyberattacks in 2015 but potentially even more damaging from a reputational standpoint is the millions of customer records accessed.

As such, cybersecurity, fraud detection and prevention form a huge part of the growing Fintech ecosystem, with financial institutions working with firms like Digital Shadows, ZeroFox and Pindrop to try and ensure the integrity of data and funds.

BLOCKCHAIN

FROM HYPE TO HAPPENING

One trend that has transcended all others throughout 2016 - certainly in terms of hype - is that of blockchain.

In simplest terms, blockchain is a secure and distributed ledger, allowing for the unalterable sharing of data and logic. Imagine a database shared between multiple participants that does not require any form of verification by third parties; transactions could be evidenced directly between vendor and purchaser, or proof of contract demonstrated purely between those parties who are signature to it.

Blockchain is perhaps best known as the technology underpinning digital currencies such as Bitcoin and Ethereum, yet the excitement around blockchain far exceeds these (admittedly important) Financial Services developments.

Blockchain is widely regarded as a potential "foundation technology", one which could fundamentally change the transmission of data and execution of processes within not only financial services, but any industry reliant on incorruptible data communication.

While major financial institutions may have been slow to recognise the potential of other Fintech technologies, even *they* woke up to the potential of blockchain in 2016.

The industry recognises that there are significant obstacles for blockchain to overcome, including educating both regulators and customers as to the nature of the technology and building trust in such an open platform. That said, considering previous comments regarding cybersecurity and fraud prevention, the fact that Bitcoin - built on blockchain infrastructure - has not been hacked in its 8 year existence is both remarkable and a potent demonstrator as to the potential of blockchain as a future technology.

THE RISE OF DIGITAL

Banks and large financial institutions are, almost exclusively, hindered by legacy operating systems and back office processes that lack agility and an ability to adapt to emerging technologies. Consequently, 2015 saw many Fintech start-ups start to challenge the dominant position of the existing players in the market, with digital (or challenger) banks coming to the fore.

> New York start-up R3 has created a consortium of over 20 major worldwide banks to investigate usage of blockchain around securities settlements and payments. Yolanda Goettsch of NASDAQ told delegates at Money20/20 2016 that "over two thirds of the world's banks are currently investing in the potential commercialisation of blockchain by 2019".

With the ability to build their infrastructure from scratch and - by relying exclusively on digital and mobile presences - avoiding the need for traditional bricks and mortar operations and costs, this new breed of bank has capitalised on customer demand for features such as real-time information, biometric security, simple money transfer and open API integrations.

New digital banks have found a particularly receptive market in the UK, partly due to a simplified regulatory regime for Financial Services (more on this later), but also due to a customer base that is simultaneously distrustful of large institutions, yet willing to trust banking solutions that are entirely digital based. Banks such as Atom, Monzo, Tandem and Starling have created alternatives for UK customers, whilst forcing existing UK banking giants to improve their customer-facing offerings such as mobile apps and online banking platforms.

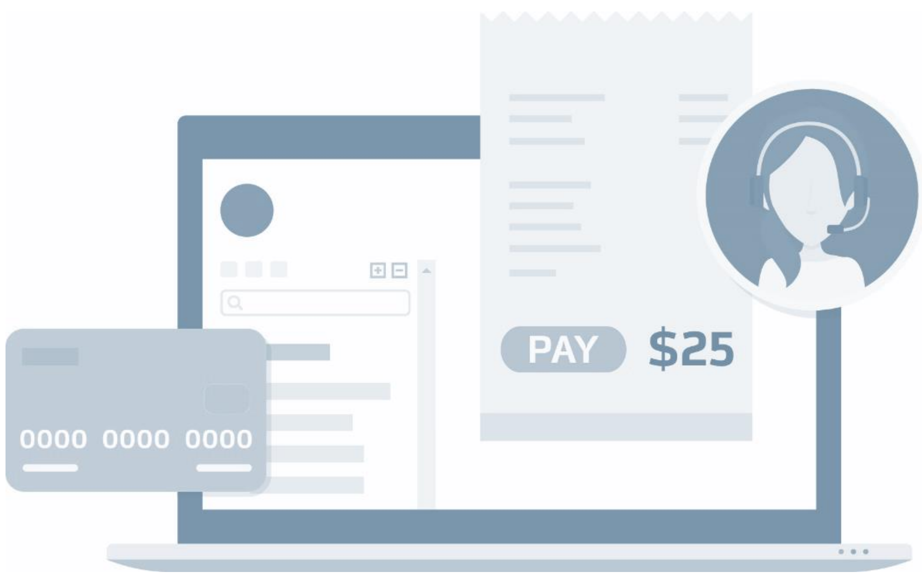
In 2016, institutions seemed to shift perspective on digital banks, seeing them less as competition and more as potential partners. With the acceptance that neither digital banks nor customers are likely to wait for large institutions to catch up technologically, banks are increasingly looking for ways to collaborate with Fintech start-ups to integrate their capabilities into their customer service offerings. This has been increasingly common on the lending side in 2016 (such as Santander's partnership with Kabbage, or JP Morgan's tie-up with OnDeck) and similar partnerships seem inevitable.

SHAKING UP PAYMENT PLATFORMS

Fintech's annual gathering in Las Vegas, Money20/20, hosted several keynote speakers from the payments world in 2016. Among the interesting observations made was that by Blackhawk Network's CEO Talbott Roche, who noted that "Payments continue to move towards the point of influence, rather than just the point of sale".

She went on to explain that customers were increasingly seeing the experience of the payment as a driver in a transaction, rather than merely an inevitable part of the process.

For instance, customers are more likely to shop somewhere if they are part of a loyalty scheme, or if their payment method (such as a credit card) carries a certain reward. As these incentives become more sophisticated (companies are increasingly mining and analysing customer spending patterns in a bid to help retailers tailor their rewards scheme towards individual customers) in the age of Apple Pay, Samsung Pay and the mobile wallet, so payment platforms are having to consider how they fit into the overall supply chain rather than merely providing a point of sale (POS) service.

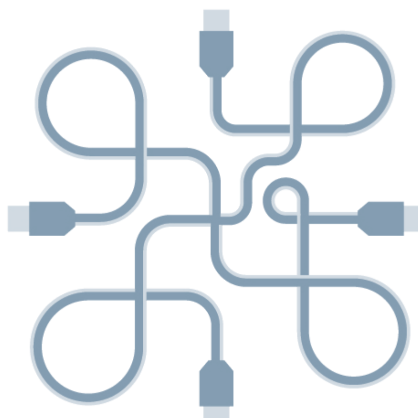


POS terminals themselves are increasingly becoming part of the advanced payments platform. Poynt and VeriFone are among the companies looking to ensure that "smart" POS terminals - with rapid upload of data to the cloud for analysis and real-time information purposes - are the new standard. This data will itself feed into the advanced loyalty programs mentioned above.

Behind the scenes, the infrastructure upon which payments processing is built is shaping up for a major revamp. Acknowledging that siloed legacy systems and regulatory compliance have hampered technological advancement in the back end of payment processing, financial institutions are finally beginning the process of creating centralised payment hubs, enabling them to improve corporate payment services. This creates significant opportunities for partnerships with developers of open APIs and Fintech companies such as Ripple who are already creating next generation payment networks.

CYBERSECURITY: NECESSITY & OPPORTUNITY

As banks and financial institutions increasingly look to service customer demands through mobile and online facilities, the risk of cyberattack becomes ever greater. Theft of funds is no small matter but the threat of data theft is, if anything, even more significant.



In 2015 a study by IBM and the Ponemon Institute found the average cost to a business of a data breach was $3.79 million including reputational damage. With giants such as Sony, Target, JP Morgan and Ebay all suffering huge data losses in 2014-15, cybersecurity is becoming an ever more crucial part of the Fintech ecosystem.

As a result, existing cybersecurity firms such as root9B and IBM Security are increasingly tailoring their products towards financial institutions, whilst other Fintech start-ups are tackling other aspects of this particular niche. Apple and Samsung have already partnered with others to integrate fingerprint recognition into their phones, which play a key part in authorising mobile transactions on those devices.

Companies such as Eyeverify and Facephi are focussed on facial recognition which can be implemented into financial institutions' own apps for security purposes, whilst others have developed vocal recognition into open APIs for banks to consider. (Barclays have recently begun trialling vocal recognition software for personal banking.) Institutions themselves are considering ways to make their internal processes more secure from external threat.

This whitepaper has already highlighted the seemingly secure nature of blockchain that underpins Bitcoin and this has not gone unnoticed by banks. Blockchain is by no means a silver bullet - its limitations as to the volume of transactions it can handle means that, at present, it would be unfeasible for large financial institutions to run on a blockchain infrastructure - but banks and Fintech start-ups are increasingly looking towards its potential from a security perspective, particularly the idea of decentralised ledgers. This has been much discussed in 2016, and we're likely to see the beginnings of blockchain integration into major financial institutions' data protection regimes over the next 18-24 months.

THE UK AS THE PERFECT "SANDBOX" FOR FINTECH COMPANIES

Much of this whitepaper has been given over to the interaction between existing financial institutions, emerging Fintech start-ups and the customers that they both aim to serve. However, a fourth critical stakeholder cannot be overlooked; namely, the regulators of financial services companies.

As emerging technologies seek to shake up existing financial service offerings, companies face the same challenge with regulators as they do customers - educating them as to the nature of their product and convincing them of its security and viability.

The challenge for Fintech companies is that, given the innovative technologies being employed in a sector that has been built on a stagnant, aged infrastructure, financial services regulators can be unfamiliar with many of the new underlying technologies being introduced by firms looking to disrupt.

Coupled with the fact that such technologies are rarely fully formed when first introduced to a marketplace, it can be exceptionally time consuming for new entrants to the industry to secure approval from the relevant regulators.

This is particularly true of the US, where the sheer multitude of regulators required to sign off on such products - there are 11 different federal regulatory bodies, plus each individual state will also have its own regulator - can result in considerable legal and time costs for firms just to be authorised to bring a product to market.

This goes some way towards explaining why the UK remains such a draw for emerging Fintech companies, with 16 Fintech companies having set up headquarters or European headquarters in London since January 2015.

With a single financial services regulator (the Financial Conduct Authority - FCA) having been formed in 2013 to replace the former regulator (the Financial Standards Authority), the regulatory climate in the UK is significantly easier to negotiate.

With events such as London Fintech Week demonstrating the sector's increasing importance to the UK economy, a strong relationship and continued dialogue between the UK regulator and the community seems assured, to the benefit of all in the Fintech ecosystem.

> We love the Fintech innovation happening in London, it's absolutely world class.
>
> Rod Drury
> Xero

WHAT CAN WE EXPECT FROM 2017?

Looking ahead, it's clear that many of the trends established within Fintech over the last 18-24 months are likely to continue:

- Well established financial institutions will continue to invest in and collaborate with emerging Fintech start-ups to offer customers the cutting edge mobile and online interfaces they crave, particularly given the challenges associated with overhauling the financial service industry's own aged infrastructure.

- Cyberattacks will remain a significant threat, with as much focus on protecting the growing Fintech ecosystem as there is on expanding it and integrating it into existing financial services. Blockchain is likely to play a key part, with banks continuing to examine how decentralised ledgers can offer greater security for both funds and data, whilst biometrics will continue to be integrated into everyday mobile banking apps, increasing consumer trust of the products.

- Cloud technology and Big Data (including Artificial Intelligence and Cognitive analysis) will form the backbone of much of the new systems, with technologies evolving to develop more robust fraud prevention, faster payment rails for payment processing, more tailored customer reward and loyalty schemes and even enabling tax authorities to review company tax disclosures on a "real time basis".

In the excitement surrounding Fintech and its potential to disrupt the financial services sector, perhaps the most insightful comment on the potential of disruptors came from the North American President of one of 2016's most successful Fintech firms, Earthport. Jonathan Lear said "Disruptors don't just upset and disrupt the competition. The most successful are those who disrupt customers' low expectations of a product or service."

Given the low customer satisfaction levels traditionally associated with the financial services industry, both companies and investors would do well to bear Mr Lear's statement in mind when considering the potential impact of their product on a customer base crying out for security and simplicity in their financial affairs.

CONCLUSION:

What *is* clear is London's (and the world's) Fintech sector is showing no signs of slowing down its exceptional growth. Continued investment (not least from existing banks and financial institutions), an ageing infrastructure, faster, more secure and efficient transactions and a large customer base eager for change is all fuelling a sector which promises to remain at the forefront of development and economic growth for years to come.

As Fintech companies ride this wave and expand internationally, looking to take advantage of the UK's favourable regulatory climate as well as its other assets (including language, time zones, talent and technical infrastructure), it's crucial to find a partner who understands the industry and the unique demands of Fintech companies entering new territories .Fitzgerald & Law has successfully helped over 15 Fintech companies with their UK expansion and day to day operations in the last 18 months by combining our sector knowledge with over 20 years' experience.

With 90 professional staff in Central London, an office in San Francisco and a global network of advisors in 48 countries, F&L can assist with all aspects of tax, banking services, accounting, payroll & HR, ensuring that you maximise your investment as you grow your business overseas.

> The most successful are those who disrupt customers' low expectations of a product or service.
>
> Jonathan Lear
> Earthport

THE TOP 20 FINTECH GAMECHANGERS 2017

iOvation – Crowdsourced mobile device verification

Chain – Blockchain infrastructure and high-profile partner of Visa

Eyeverify – Transform a selfie into a digital key

Feedzai – Fraud prevention through data science

Marqeta – Provider of open API processor access to its payment platform

Payoneer – Online money transfer and ecommerce payments

Moven – Mobile banking app, with a network of over 42,000 accessible ATMs

Jetpay – Debit, credit and prepaid card processing

Id Analytics – Employing alternative credit data to help companies with fraud detection and prevention

Ripple – Alternative real-time payment platform

IdentiyMind Global – Risk prevention and fraud detection

AcceptEmail – Enables financial institutions to push notifications to their customers more efficiently

CurrencyCloud – Cross-border payments platform reducing forex costs for individuals and small businesses

Identitii – Embedded payment verification, enabling additional detail to be included in the payment process

WePay – Online payment solutions for crowdfunding websites and software businesses

FacePhi – Portuguese start-up applying facial recognition biometrics as a transaction verification tool

Pindrop – Fraud detection and prevention for phone calls through audio analysis of callers' voices

Trusted Knight – Cybersecurity for enterprise, focussing on malware and a cloud-application web firewall

Mobeewave – Mobile contactless card payments

Jumio – Digital verification through a simple photo of an individual's government issued photo ID

Gareth Davis is a UK chartered accountant and tax specialist based in San Francisco.

Gareth has been helping North American tech companies expand internationally for ten years - focussing on global tax issues such as permanent establishments, transfer pricing and international structuring.

Contact Gareth at: +1 415 517 7166 / gdavis@fitzandlaw.com.