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JOURNEY TO THE FUTURE OF MONEY

OCTOBER 27-30, 2019
Money USA 20/20

The Fintech Power 50 & Fintech Times Special Edition

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Commercial Models, Value Chains, M&A Activity: Music to My Ears

Author, Title

Much like the music industry, over the past two decades, the financial services industry is changing in major ways. Long-standing business models, value chains and companies are being replaced by new ones. This represents an opportunity for companies to transform for the new world through M&A, new products or partnerships.

My CD collection used to be my pride and joy. I used to measure the value of paychecks in terms of how many CDs they could purchase. I vividly remember the electric excitement when my father, also an audiophile, first purchased a full rack audio system complete with dual tape deck, record player, cd-player, equalizer and power amplifier. Recently, my mom, who is in the process of clearing out their house, asked me if they should just throw out their CDs. On one hand, that seemed to be a very practical solution. On the other hand, it brought up the emotions raised by the music collection built over decades and representing the collective works of many artists.

In the US, CD sales peaked around 1999 and 2000, with nearly a billion each year, and then dropping thereafter. Prince was remarkably prescient when he sang about partying like it's 1999 and 'two-thousand zero zero, party over it's out of time!' Last year, CD sales were around 50 million, or 5% of what they were at the peak. The music industry has been disrupted by new technologies (internet, file sharing), changing content (music videos, mashups, sampling), changing distribution (record stores, subscription clubs, online store, streaming), and changing consumers.

Financial services has been impacted by many of the same trends that tore down the old music industry and rebuilt a new one in its place. As commerce moved online, financial services such as payments and lending needed to follow suit. As goods and services were deconstructed and delivered on-demand or as-a-service, subscription management and ID/fraud management needed to address new needs. As businesses and consumers saw their assets become global and virtual, banking and investing needed to evolve for the new world.

We are still in the thick of transformation across industries, geographies and functions. Some market needs remain constant, while many will be completely transformed. Many of our cherished beliefs will be tossed like Milli Vanilli CDs into the dustbin of history. That is why we are seeing unprecedented activity in terms of changes to commercial models, value chains and M&A activity.

From the commercial model perspective, payments and banking software providers used to fight vigorously every 5-7 years when RFPs were sent out to find the best solution. Increased market competition and greater customer choice made 'best-in-class' change much faster than every 5 years. I personally used to send out and respond to RFPs nearly 20 years ago, and now the process feels like I'm listening to an 8-track tape. These processes resulted in bulky relationships with limited flexibility, often with both sides feeling let down by the experience in the end.

From the value chain perspective, companies and organizations bring many things to a product or service, such as capital, technologies, people, processes and other assets such as distribution or brand. Recognizing that I'm painting with a very broad brush, large company strengths lay in capital and processes, while smaller companies often excel with technologies and people. In the past, large companies could rely upon their distribution and brand as key differentiators as well, but the digitization of the economy and changing consumers has leveled the playing field in those areas. Changing dynamics in the value chain could erase old choke points or create new ones. For example, easy digital access to recorded music obliterated the need for brick and mortar specialty record stores, but it also increased the importance of touring and live music for artists, creating opportunities for companies like LiveNation. What will be the new choke points and bottlenecks in tomorrow's financial services industry?

The dynamic market has opened up greater risks and opportunities- often a trigger for M&A - causing companies to make more Money Moves than Cardi B. We are seeing new entrants, be it from Asian companies seeking to expand in the West, or vice-versa, large technology companies seeing opportunity in financial services, or from Unicorns, flush with new capital. There have been several large acquisitions within the past 6 months, which increases pressure in terms of capabilities, pricing, and relationships or distribution. These acquisitions have happened across sectors and geographies, leading to a bit of an arms race amongst companies.

The common equation for M&A is '1+1=3'. In other words, the combination of companies is greater than the sum of its parts. Unfortunately, many times the '3' often works for yesterday or today, but not tomorrow. Given the current dynamism in our industry, the strategic reasons for doing a deal can be greater than the financial reasons. In certain sectors, such as payments and core banking software providers, M&A activity is focused on building scale and gaining access to customer relationships. In other sectors, like payment networks, M&A activity is enabling access to new technologies to offer existing customers.

The fact that these trends are so important today and will have dramatic impacts for the future is why 'Commercial Models, Value Chains, M&A Activity' is one of the key stories for Money20/20 this year. With implications for companies large and small, around the world, there will be much discussion, debate and learning about these topics. Much like, whether or not my parents should keep any of their CDs or not, the answers won't be straightforward and there isn't a 'one-size-fits-all solution. Once we figure this out, then I'll be able to go to the basement and figure out how to monetize my parents' amazing LP collection, but that's an article for another day.

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Financial services has been impacted by many of the same trends that tore down the old music industry and rebuilt a new one in its place.

THE FINTECH TIMES

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OCTOBER 27-30, 2019 Money 20/20 USA

EDITOR'S NOTE

The Fintech Times and The Fintech Power 50 is proud to present our Money 2020 USA Special Edition supplement, featuring unique insights from the most influential players in financial technology. These are the true game changers who are diving into innovation head first.

For four days, Las Vegas will bring together titans of industry, providing unparalleled access to a plethora of networking and learning opportunities. This issue aims to inform on all the latest developments in payments, banking, fintech and financial services.

Today's SMEs face their fair share of challenges, and Anders la Cour, (co-founder and CEO of Banking Circle) is on a mission to promote financial inclusion on page 5. Chris Skinner observes the friction between the two worlds of tech and government on page 8. With data breaches continuing to make headlines, Robert Prigge (Jumio president) lays down key steps on page 12 to safeguard organisations in an era where trust has become a rare commodity. And fintech influencer Ghela Boskovich wrestles with the idea of being included in a "Top 100" list in her feature on page 9.

Money 2020 USA is one of those special events that has the potential to genuinely change perspectives and shed new light on stale ways of thinking. Whatever your aspirations for attending, we'd like to wish you a successful trip and we hope you find this to be a resourceful guide throughout.

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CHARLEY BROOKE BARNETT
Digital Editor

Payments Innovations for SME Financial Inclusion

Anders la Cour, *Co-founder and Chief Executive Officer of Banking Circle shares insights from the latest Banking Circle research into the challenges and opportunities facing SME payment providers.*

Effectively serving SMEs requires FinTechs and Payment Service Providers (PSPs) to have a true and meaningful understanding of the reality of small business life. Many PSPs are indeed SMEs themselves, which can be invaluable in assessing specific needs and the challenges SMEs might be facing. And this can put them in a strong position to develop solutions – working with like-minded partners – that exactly fit the bill.

But at the heart of the issue is the fact that PSPs must build SME-specific solutions, not adapt models built for larger businesses. And this is exacerbated by the fact that each SME is entirely unique – some are one-man-bands, others have 249 employees. Some are local businesses while others trade internationally. Some are seasonal and others have a steady flow of income throughout the year. This immense variation creates a dilemma for financial institutions trying to build scalable solutions to meet SME requirements.

With businesses varying in almost every way, no single payment solution can meet all the financial needs of every SME. There is no one-size-fits-all solution.

The latest research from Banking Circle is published in our insight paper, 'Pay, Set, Match! Payment services for SMEs – Jump-starting a virtuous digital payment circle' and investigates the challenges and opportunities for PSPs serving SMEs today.

What we have found is that what all SMEs have in common is a need for banking services. Any business, any size, and industry, any target market and any turnover will need banking accounts. And almost all will, at some point, need an injection of cash, whether that is to kick-start an expansion, purchase stock at the beginning of the season or to replace broken equipment.

The reality is, however, that a traditional business loan from a bank is generally too expensive, too inflexible and too slow to arrange, for a fast-paced SME in today's highly competitive, digital and international marketplace. As Kent Vorland, CEO of SmartTrade App, told us during our research, "consumer products are not agile enough and providers have little knowledge of small businesses... Equally, the big boys have complicated functionalities, but nothing optimised for small merchants."

We found that limited access to services and restricted credit lines are affecting the success and potential of SMEs of all sizes and stages. SMEs also commented that access to payment services is restricted, it takes too long to open a merchant account and there is little support for accounts payable.

Each of these can have a significant impact on an SME's ability to maintain and grow its client base and profit margin. In turn, this limits its ability to expand, reach new markets, increase product lines and better serve its customers. With 24 million SMEs in Europe making up 99% of private businesses in the region, employing around 60% of the European workforce and contributing more than half of all business turnover, a problem holding back SMEs is a problem holding back the entire economy.

With many PSPs and other providers already delivering innovative 'point' solutions, and many ambitious SMEs currently underserved by their existing bank, the opportunity to build bridges and connect solutions is ready and waiting. Each provider has a role to play, and value to add, if they build relationships across the board.

As reported in our insight paper, financial inclusion based on digital technology occurs within a broad spectrum of technology, communication, collaboration and analytics. Innovation and real change is only possible within an ecosystem model where each player knows its own role and appreciates those of others. Dialogues must be kept open, and innovation must continue, in order to find and develop successful, effective, affordable solutions which will work for SMEs of all types, increasing financial inclusion and benefiting the entire economy.

For a copy of the latest insight paper, visit www.bankingcircle.com

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AT A GLANCE

WHO WE ARE

Banking Circle is a financial utility that focuses on providing global banking services to financial institutions, including financial technology companies and banks.

COMPANY: Banking Circle

FOUNDED: 2013

CATEGORY: Global banking services

KEY PERSONNEL: Anders la Cour, CEO (above)

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WHAT WE DO

The network for global commerce

A Platform on a Cloud: The Financial Industry's Bright New Horizon

By **Martin Häring**, Chief Marketing Officer, Finastra

The global financial system is in the midst of a tech-driven, transformational shift. Consider that in a recent survey by Business Insider, 89 percent of respondents said they use mobile banking—including 97 percent of millennials. When it comes to technology-driven innovation in the financial sector, the ability to check account balances and transfer funds via mobile device is only the tip of the iceberg. With fintechs and other digital disruptors bringing new products and services to market every day, banks looking to the future face a myriad of challenges and opportunities. Fortunately, even the most established legacy institutions can tap into the innovation happening in the fintech space via cloud-based platform technology.

The future of finance is personalized, tech-driven, and open

Unlimited access to movies and TV shows on demand, on any device; two-day shipping for almost any consumer product available to purchase (same-day, if you live certain cities); information on any topic, directions to any place, and a vast archive of images at our fingertips, 24/7. Given the environment today's consumer is accustomed to, it's no surprise that they expect instant gratification from any entity with which they do business. Waiting in line, being put on hold, corresponding by mail, and even having to visit a brick-and-mortar establishment of any kind are increasingly seen as inconveniences that warrant taking one's business elsewhere—preferably, via app.

Banks are not immune to consumer demands for speed and convenience. And despite their status as legacy institutions and significant investments in customer loyalty, banks are also not immune to competition. The fintech sector is booming: according to KPMG's Pulse of Fintech report, global fintech funding reached $111.8 billion in 2018, up 120 percent from the previous year's total of $50.8 billion. As of June, 2019 deal volume had exceeded the 2018 total, with 87 deals totaling $116.6 billion in value. In London alone, 114 deals worth a record $2.1 billion were completed in the first eight months of the year, and the American fintech hubs of San Francisco and New York saw investment totals of $3 billion and $1.9 billion, respectively, during the same period.

Tech-driven disruptors are emerging in every corner of the financial services industry, from budgeting to investing to mortgage lending. Banks that fail to offer the digital tools and frictionless user experience that consumers prefer risk losing customers to these fintech challengers.

But banks and fintechs don't have to be sworn enemies. In fact, many have recognized that their complementary strengths can lead to successful, mutually beneficial partnerships. Instead of a fighting a losing battle against fintech firms, banks are employing open banking and Platform-as-a-Service (PaaS) to join forces with emerging fintech providers and bring to market the services their customers demand. Adopting open architecture and sharing data via APIs allows banks to provide personalized, convenient services to customers without having to build new tools from scratch

.

The key to innovation lies within the cloud

Forrester predicts that the global cloud computing market will exceed $200 billion in 2019, and will then continue to grow 22 percent annually. Like many businesses, financial institutions of all sizes are realizing the power of the cloud. In a survey of senior finance executives, Gartner found that 36 percent of their enterprises will use the cloud to support more than half of their transactional systems of record by 2020.

In the banking sector, cloud-based models can enable business agility and rapid evolution. Cloud-driven innovations can help banks satisfy evolving business needs without having to compromise on security and or take on the burden of investing in IT transformation.

Speed, agility, and analytics

For developers, working in the cloud simplifies and accelerates the product development cycle while also minimizing risk. For example, product testing places a heavy burden on computing resources and can take unpredictable amounts of time. As a result, it substantially increases the peak capacity needed in-house, while also driving down the utilization rate. Conducting product tests in the cloud, on the other hand, removes this burden from the bank or fintech company's day-to-day operating system. Creative, innovative IT departments and developers can take risks designing and launching new products, knowing that computing capacity can be adjusted as needed. This enables a level of agility in testing and launching new products that would not be available without the use of the cloud.

In addition, financial firms that store data in the cloud can unlock powerful analytics capabilities by tapping into artificial intelligence and machine learning—processes that are far more viable in the cloud. This extra dimension of analytics maximizes opportunities to bring successful products to market. Finally, a cloud-based development process enables organizations to roll out successful products immediately, with no hold-ups for procurement. As open banking proliferates, and more banks look to develop customer experiences that leverage new technology, banks that operate in the cloud will realize distinct advantages over those that do not.

Built-in security upgrades

Historically, banks were reluctant to embrace the cloud due in large part to concerns about security. But in recent years, security has shifted from being a perceived weakness of cloud computing to one of its distinct strengths. Most individual banks are ill-equipped to compete with the security resources and standards upheld by public cloud providers. For example, Microsoft alone spends more than $1 billion a year on cloud security, whereas a study from Deloitte calculated that financial institutions annually spend an average of only $2,300 (£1,900) per full-time employee on cybersecurity.

Another area that had historically given some financial institutions pause with regards to adopting the cloud is compliance. But regulators around the world have updated their thinking as cloud-based models have become more widespread—and more secure. For example, the UK's Financial Conduct Authority previously required physical access to servers for itself and auditors, which was problematic for multi-tenant public cloud users. But in 2016, the agency replaced its "choice and control" rules with broader data residency requirements (guaranteed by public cloud providers) and confirmed that it could see no fundamental reason why regulated entities should be prohibited from using cloud computing. Europe's second Payment Services Directive (also known as PSD2), requiring banks to make customer account data accessible to qualified payment-service providers, creates avenues for partnerships between fintechs and banks, many of which rely on the cloud. And in the United States, the Conference of State Bank Supervisors is working directly with fintech firms on ways to streamline regulation while maintaining strong consumer protections and local accountability.W

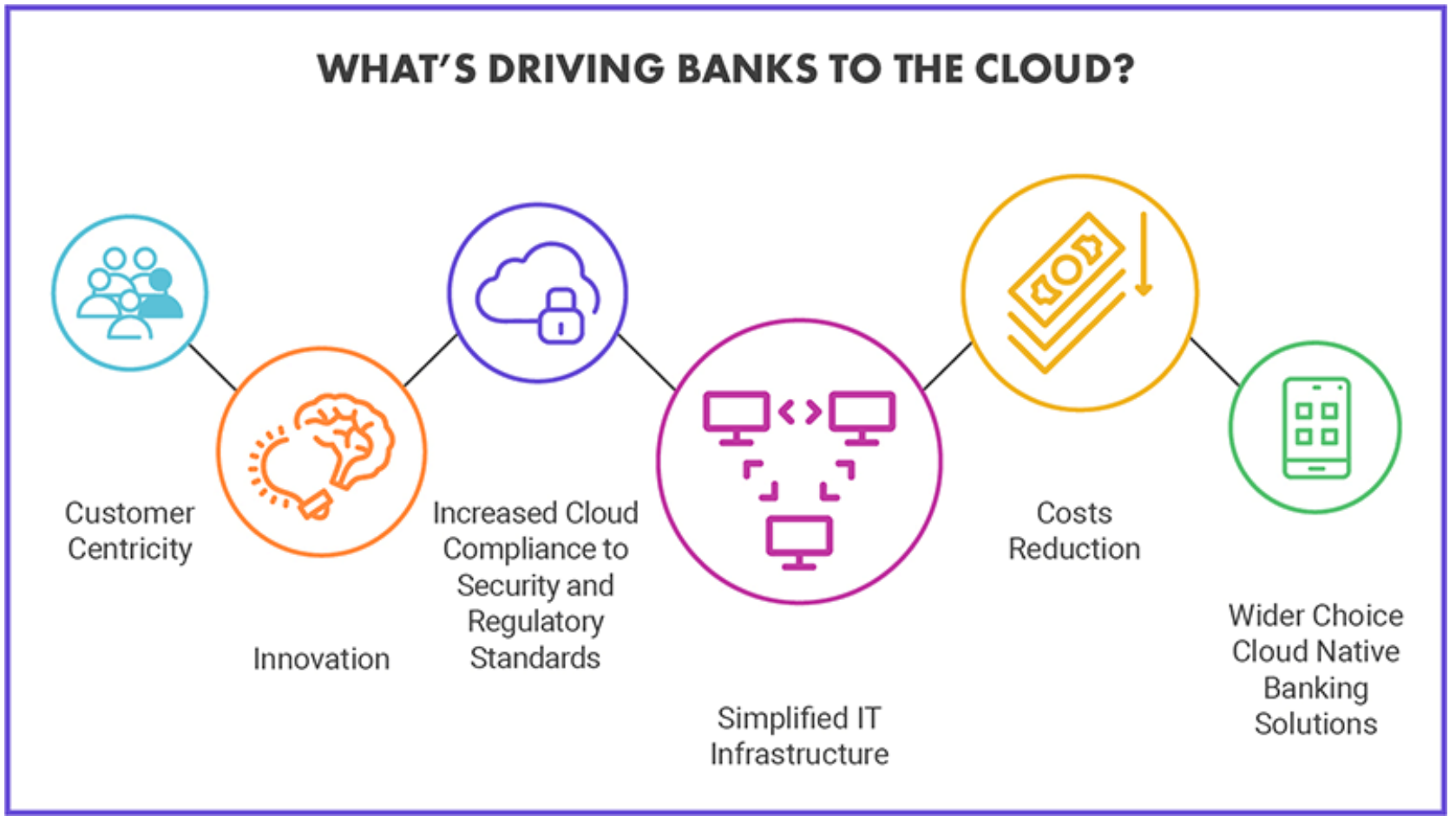
With consumers pressuring financial services providers to innovate, and the cloud setting the stage for enhanced capabilities in product development, data analytics, and security, banks are at a crossroads: evolve—and quickly—or be left behind. For those that elect to embrace the fintech revolution, partnering with startups and disruptors is often the most realistic and effective way to offer the tech-driven advances their customers demand. A platform solution allows banks to establish these relationships and plug into the tools and applications they need via open APIs, while also providing a number of related benefits to both the fintechs and the banks who participate.

Platformification: making the most of the cloud

While initially slow to adopt platform models, the banking industry is quickly recognizing the advantages they offer, too. Platformification introduces opportunities to grow revenue streams, attract new customers, and expand into adjacent industries. Perhaps most importantly, the combination of platforms, APIs and open banking is creating a multitude of powerful new ways to engage with customers at reduced costs.

A platform model enables financial institutions to engage with a broader ecosystem (including fintechs) and realize valuable innovations at speeds that were unthinkable in previous eras. Unlike in the past, when innovation happened behind the closed doors of corporate R&D departments, today new ideas can stem from universities, corporations and fintechs. In many cases, the more uncommon the partnership, the more impressive the results it yields.

When it comes to implementing new technology, historically the road to true innovation had meant core replacement: a complete overhaul of a bank's proprietary IT infrastructure. Most of these core systems were established decades ago, extend



throughout all facets of the banking ecosystem, and do not necessarily work seamlessly with new technologies and services that banks need to adopt to remain competitive. Because they were not designed with the latest technologies and bank functionality in mind, adding new solutions for bank customers requires shoehorning and patching. A core replacement is a tremendous undertaking for institutions of all sizes, and the implications are not limited to cost: the effects reverberate throughout the entire institution.

Undertaking a core system overhaul is a complicated task, and one that is often prohibitively costly and disruptive—particularly for smaller regional or community banks. But thanks to platformification and open banking, banks don't necessarily need to replace their existing cores to spur innovation. By embracing "platform-as-a-service," or PaaS, banks can innovate around the core through the use of open APIs.

The platform model also helps banks satisfy customer-driven expectations around open banking. Consumers are increasingly looking to leverage and access their personal data across services—for example, expecting one personal finance app to aggregate their accounts from a variety of institutions. By leveraging a platform model via the cloud, banks can make their customers' data available, in a secure way, to the applications and services in which they wish to use it.

Finastra is leading the open banking platform charge

Finastra's Platform-as-a-Service solution is purpose-built to unlock innovation in financial services. FusionFabric.cloud is a hybrid development platform and API marketplace designed to champion collaboration and encourage innovation by opening up its core systems to all players in the financial services ecosystem – banks, fintechs, system integrators, independent developers, consultants, students – allowing third parties to develop applications on top, and enabling the development of a previously unachievable range of services. For legacy financial institutions, this makes it possible to lease integral banking software, hosted in the cloud, with pre-integrated fintech components. For emerging industry players, it offers a crucial competitive advantage via faster customer onboarding, which helps to facilitate rapid growth.

FusionFabric.cloud is made up of 3 core components:

- The Fusion Creator developer portal, which hosts Finastra's API Catalog – providing access to its core system open APIs, complete with documentation and sandbox access.
- The Fusion Operate secure production environment, hosted on Microsoft Azure, which allows users to connect apps to Finastra software without having to build their own cloud infrastructure.
- The Fusion Store, a marketplace from which applications developed on FusionFabric.cloud can be promoted, bought, sold and consumed.

The Finastra platform connects innovative fintechs with banking institutions and other digital customers through a marketplace of self-discovery. As new APIs are created, they establish more fintech use cases, and more customers are attracted to the platform—facilitating increased value for platform users and growth across the entire industry. Leveraging the platform model, firms can deliver innovative applications quickly (new apps and products launch in an average of six to eight weeks) and at low cost, transforming their own operations and development centers.

Additionally, as the FusionFabric.cloud community grows, the platform will act as a vendor, making apps developed by the fintech community's rising stars available for purchase. Finastra's ultimate goal is for their platform to transform financial services in much the same way that mobile app stores and their offerings have transformed consumers' everyday lives.

Examples of platformification in action

In September of 2019, Finastra announced the launch of two new applications built on its FusionFabric.cloud open development platform: Allied Bill Payment and RoboSave. These applications, built in collaboration with banks and credit unions, demonstrate the opportunity and utility that a platform model offers to both banks and fintech providers.

The Allied Payment Network built its real-time bill pay solution, Allied Bill Payment, on the FusionFabric.cloud platform in conjunction with Certified Federal Credit Union. The application helps financial institutions retain and grow their customer base by allowing users to receive, store, and pay their bills all in one place, thus positioning the institution at the center of the consumer's finances. It immediately moves funds from the user's bank account, limiting risk to the credit union, and will soon allow an instant funds push to the biller for immediate confirmation that the bill has been paid. Using FusionFabric.cloud, Allied was able to reduce their development and integration time from 10 weeks to only two days.

Atlanta-based fintech Monotto used FusionFabric.cloud to build an automated savings tool called RoboSave. While existing personal finance apps general rely on users to take action to build their savings, Robosave makes establishing a financial safety net automatic. The application examines users' spending patterns to calculate what amount of money is an appropriate target to set aside for emergency savings. Then, using artificial intelligence, RoboSave determines how much consumers can comfortably save without affecting their spending habits, and automatically allocates that amount toward their emergency fund savings target. Integrating RoboSave to FusionFabric.cloud yielded contracts with several Finastra clients, who are able to onboard the app in less than one week.

In today's tech-driven, data-rich business environment, innovation moves faster than ever before. Conducting business at the speed of tech—and keeping pace with customer expectations—can present significant challenges to financial institutions. But technology also opens new doors to opportunity. Partnerships between financial institutions and disruptors in the fintech space enable banks to offer a greater breadth of products and services, personalize their offerings to address specific customer needs, and deepen customer relationships at a lower cost than was possible in the past. Leveraging a cloud-based platform to conduct these partnerships enables banks and fintechs to take full advantage of the speed, agility, and security offered by today's public-facing cloud providers. As regulatory support for fintech grows, and financial institutions realize the power of the cloud, Finastra continues to evolve to support the growth of groundbreaking products and partnerships.

As Chief Marketing Officer, Martin Häring is a member of the executive leadership team at Finastra and responsible for the global marketing organization and strategy.

A driver of innovation with over 25 years' experience in technology marketing, Martin is an influential tech marketer and regular speaker and blogger on digital transformation within the world of financial services. Examining how technology can unlock the potential of people and businesses and enable financial inclusion, Martin is recognized for his thought leadership around Open Banking. He is also known for his focus on client engagement and pioneering ideas around enhancing the customer experience.

Martin joined Finastra (formerly Misys) in October 2013 as Chief Marketing Officer and, prior to that, held executive leadership positions at Sun Microsystems, Oracle and Akamai Technologies Inc. – a content delivery network and cloud security services provider.

You can follow him on LinkedIn: https://www.linkedin.com/in/martinhaering

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CRYPTOCURRENCIES VERSUS GOVERNMENTS

By **Chris Skinner**

A long while ago, the bitcoin libertarian army shouted we've got money without government. I've argued against them for over a decade, saying that money was invented for government. You cannot have money without government. They hate me. They call me a statist, an old man, someone who doesn't get it, someone past their sell-by date and more.

But I stand where I stand. Money was invented by government to control societies and economies. It exists to administer tax, create order and control people. You cannot get past this. I understand where the libertarians are coming from, however. They believe the decentralisation of the internet through distributed ledgers and cryptocurrencies democratises the world. The government will now be the crowd on the platform, with no central control.

Suffice to say, so far, I am proving to be in the winning corner. China is a great example. China has the Great Firewall and has managed to effectively wipe out bitcoin investing and trading within its borders. It has regulated the markets to ensure the only thing that will be traded will be Yuan. It may be a digital Yuan, but it's still one issued by the People's Republic.

Another great example is the efforts of Facebook to launch a digital stablecoin called Libra. It may be tied to the US dollar and other currencies, and it may be tradeable between over two billion people over Facebook, Instagram and WhatsApp, but it's not getting off the ground soon. The US government is trying to stop its launch, and European governments such as France have banned it. The issue is that Facebook cannot be trusted – look what they do with user data – and so cannot possibly be involved in anything financial. Hence, governments hate the idea of a digital currency run by Facebook and have strong armed many of the founding partners to leave, including Visa, Mastercard and PayPal who, bear in mind, are all registered firms on American soil.

Meantime, what Facebook has achieved is getting governments to start doing something. For a long time, there has been discussions of governments launching their own digital versions of their fiat currencies. A digital Yuan will come first, but a digital Euro and digital Dollar will soon follow.

Central banks have long rumoured issuing digital currency versions of their fiat currencies, but have hesitated to do so. However, Libra has spurred them into action with China being one of the major economies trying to get there first, before Libra becomes a reality. More than this, however, is the fact that Facebook's move has got the regulators frightened.

The announcement of Libra injected a real political urgency into a technical debate,

previously confined to the research papers of central banks. In fact, truth be told, it has even made the US government change its view of the world, so much so that a digital Dollar is now being discussed.

Philadelphia Federal Reserve bank president Patrick Harker said in October that it is 'inevitable' that central banks including the U.S. Federal Reserve will start issuing digital currency.

"Frankly I don't think we should be the first mover as a nation to do this", Harker said at a community banking conference, given the dollar's role as the world's reserve currency and the need to test out new technology. But he added: "It is inevitable ... I think it is better for us to start getting our hands around it."

Interesting, and I guess China has rattled America in saying they're going to move to a government issued digital currency first. In a letter sent by Congressmen Bill Foster and French Hill to Federal Reserve Board Chairman Jerome Powell, they state that "the nature of money is changing," with more than 40 countries developing or working on their own national digital currencies, and ask the Federal Reserve to explain their "views regarding this issue at this critical juncture."

The Federal Reserve has yet to respond back on this but, overall, you get the impression that the technology world is moving as fast as it can to change the nature of money and payments, whilst the financial, regulatory and governmental world are struggling to keep up. But keep up they will. They always do. Just as you used to be able to order stuff over eBay from China and get it without tax on arrival, the government eventually susses that out and applies tax on any physical or digital delivery. They get there in the end.

And I guess that is the point. You can talk as much as you want about a world without government, but a world without government is usually an anarchy. Control eventually is applied, and governments put things back to order. That is why money exists: to enable government. A world where money has no government is a world where money no longer makes sense. After all, money purely exists for government. Money is what allows tax. Tax allows government.

This is why we have this friction between the crypto world and the real world. No government wants to allow a cryptocurrency – whether it be bitcoin or Libra – to exist without strong regulation and oversight. The average technology firm does not get this friction because the average technology firm does not understand finance and government. The average technology firm deals with five times less regulation than the average financial firm for a reason. That reason is that money and finance is all about government; technology is all about innovation and progress. Losing a selfie is far less damaging than losing a million dollars.

There will be continued friction therefore between the technology world and the world of government and, sitting firmly in the middle, is finance. As finance becomes integrated with technology – what we call FinTech – so does government. And government will find a way to keep up, to control, to manage and to be able to tax and regulate anything financial in the technology world, including bitcoin and Libra. Mark my words. ◆**TFT**

Ghela Boskovich

Ghela Boskovich Talks Gender Parity, Equality of Opportunity and "Top 100" Lists

"Top 100 Lists" are omnipresent in the data-driven clickbait factory that is today's internet. Here, TFT asks for Ghela Boskovich's thoughts on the subject, her insights being made all the more topical by the fact that the founder of FemTechGlobal has just been included on such a list herself... So, how does it feel to be named in Lattice 80's Top 100 Women in Fintech list, Ghela?

It is a mixed bag of feelings: surprise, humility, honour, disconcertment. It's lovely to be recognised for making a contribution to the industry, yet on my part there's always a confusion as to why my contribution is considered more noteworthy than so many other women whom I look up to but are missing from the list. Seeing my name along side so many impressive women I admire and respect always gives me pause: why me and not someone else?

The other side of the coin is that it validates what I'm doing, it confirms that I'm on the right path in working with others to make a difference. It's very much a case of "absolutely, all these women belong on this list – and more!" while doubting my own inclusion, especially since I believe there is more I could do to effect change.

Lists are exclusionary by construct, and they risk becoming popularity contests and ego stroking mechanisms. At the same time, they can call attention to people who do great work but don't always get the attention. Lists are a double-edged sword. I think every list should come with a disclaimer: "This is our opinion of who to pay attention to at the moment and is subject to change, is contextual, and is clearly not exhaustive".

To what extent does fintech operate on a level playing field? Would you say that the space has equality of opportunity?

Nothing operates on a level playing field, there will always be a party who has an advantage. In fintech, gender parity is obviously skewed. Let's talk stats: Women still only represent 30% of the fintech workforce, only 12% of fintech founders are women, and women founders receive just 2% of venture capital. In fact, for every 1£ of VC investment, all-female founder teams get less than 1p.

There are so many reasons for this, from STEM pipeline in schools, to the pay gap, to culture, and there is no silver bullet that would fix it, or bulldozer that would level out the playing field.

On the other hand, I'd say there is equal opportunity for new and revolutionary ideas – they can come from anyone, anywhere.

Great ideas are in abundance; what is not in abundance is the same type of access to support to execute on those ideas. There is a myth that equal opportunity to do something equates to equal access to leverage those opportunities.

> I'd say there is equal opportunity for new and revolutionary ideas, they can come from anyone, anywhere.

If you had to single out just one of your colleagues, whether on the list or not, for the exemplary work they've done in the past year, who would it be and why?

There are many who deserve recognition who are missing. Leda Glyptis for example, she's building a new core banking system as CEO of the Foundry. That's brash and bold. Helene Panzarino is another – she's created a fintech masters education course and we worked together to launch a new commercially driven pilot program model this last year. Michelle Katics has done amazing work to bring risk simulation as a solution to market, and is educating banking staff around the world on how to manage risk better. Nejoud Al Mulaik is breaking ground for both fintechs and women in Saudi.

I realise that lists are curated to be short and sweet; short and sweet means excluding phenomenal people doing revolutionary work. And therein lies the conundrum.

What measures need to be put in place at a governmental level to quicken the glacial pace of change?

Policy around education funding and STEM recruitment; policy that mandates parental leave for both mothers and fathers; policy that mandates better distribution of funding for entrepreneurs – from more fair risk assessment for lending to special funds for BAME and women founded SMEs.

Mandates for firms to be more public about their gender pay gap, and tax incentives to those companies who eliminate it. More protection for those who whistleblow on harassment and discrimination, and less reliance for closed-arbitration in those cases, as well as fewer punitive restrictions on going public/taking the case to court. These are just a few of the many measures that can drive the pace of change.

LATTICE 80's list was produced in conjunction with a "lifestyle driven financial platform for the modern woman." Do you find such associations detrimental to the cause of women in finance?

No. In financial services we're moving towards hyper personalisation of products and markets – women happen to be a huge market, considering women make 80% of all household financial decisions. Yes, the Miss Kaya app [the aforementioned lifestyle driven financial platform] targets women, but it focuses on improving financial literacy, as well as money and investment management. It's fundamentally no different from other PFM fintech offerings that do budget optimisation or make investing more accessible to the masses.

> In financial services we're moving towards hyper personalisation of products and markets -women happen to be a huge market, considering women make 80% of all household financial decisions.

"Lifestyle" only has pejorative connotations when applied to women. Like wanting to save for a Fendi handbag is worse than saving up for a Ferrari (stereotypes be damned). Irrespective of gender, race, orientation or ethnicity everyone wants the same money outcomes: to be financially secure, to understand how money works and build some wealth, to maximise the impact of the money they do have on their quality of life, and to know that they will remain solvent should a crisis happen.

Money affords us a type of lifestyle, and despite lifestyle being synonymous with consumerism, the end objective is with these types of platforms is to enable the consumer to better understand money and how to manage the money they have ◆TFT

Helene Panzarino, Lead Adjunct Fellow, Imperial College London

Nejoud Al Mulaik, Director, Fintech Saudi

> It's lovely to be recognised for making a contribution to the industry, yet on my part there's always a confusion as to why my contribution is considered more noteworthy than so many other women whom I look up to but are missing from the list.

RETHINKING FINANCIAL SERVICES WITH OPEN BANKING

It takes a phenomenal amount of innovation to protect 24 million customers and clients around the world. Every year we deliver world-class tech solutions our customers need and want. Contactless Payment. Pingit. Barclays Mobile Banking. bPay.

So what is Open Banking?

In a nutshell, more time and money for bank customers by leveraging technology and relationships.

More specifically, Open Banking sets forth legal standards that require the big UK banks to share their data through APIs (subject to customer approval). These APIs send data from the customer's bank to approved third parties, who in turn can offer different products and services. This means that Barclays customers can choose to share their data with third parties, but also bring all their accounts into Barclays.

And this is where Barclays' commitment to innovation comes in: we became the first UK bank to allow our customers to access other accounts through our mobile banking app.

The Barclays proposition

"Success will depend on whether or not customers have confidence in the propositions and see value in them. That's down to us, and the third parties, putting something into our customers' hands that gives them a different service to what they have today and offers them complete security and control over their data." Jonathan Lowe, CIO – BUK CPII (Current AC, Payments, Insurance, Information) & Open Banking.

Back to our commitment to innovation—Barclays has developed a unique platform where Open Banking solutions can flourish. We delivered a number of industry firsts to advance the Barclays' mobile app, as well as Open Banking, such as 'card freeze' – the ability to temporarily block a card if it is believed to be lost.

Additionally, we have a range of Open Banking APIs, including payment initiation, confirmation of funds, and the ability to retrieve Barclays account information. By taking advantage of our secure APIs, third-party partners and developers can enhance service offerings, improve customer engagement, and drive digital innovation across a greater number of touchpoints.

Barclays is happy to share the resources you need to get up and running—including sandbox time—with Open Banking.

One is a lonely number

That's why we collaborate. That's why we must collaborate—to ensure mutual success and the best possible user experience for our customers.

And Barclays knows something about setting up a framework for collaboration—and succeeding. Our Rise program operates a global network of state-of-the-art workspaces in London, New York, Tel Aviv and Mumbai. With over 150 FinTech companies who call Rise home, and a virtual community of over 7,500 members, we have access to a huge range of change makers in the industry. Our mission is to better connect technology, talent and trends from our network to accelerate innovation and growth for Barclays, startups and clients.

The Barclays Accelerator, powered by Techstars, is an intensive 13-week programme designed to fast-track the next generation of FinTech businesses, while also bringing innovation applicable to Barclays. With help from Barclays, Techstars, and a team of high-level mentors, the participants aim to evolve their business propositions and solve problems at the cutting edge of FinTech.

Next up: Barclays' is excited about its current endeavor with Anthemis, which is a leading global FinTech investor with whom we're going to co-launch a New York City-based studio targeting female entrepreneurs. Barclays and Anthemis will work with female entrepreneurs and their founding teams to shape and execute a vision, from concept development through to business launch and seed investment. In embracing this partnership, we're committed to increasing the limited venture capital funding (2%) that went to all-female startup teams in 2017 [reference].

Case studies—how Barclays partnerships have created customer value

Let's look at a couple of wins that formed from within the spirit of collaboration:

Flux, graduate of the London 2017 Accelerator class, digitises receipts and rewards from within your banking app, thus creating more valuable interactions with a positive environmental footprint. Barclays and Flux partnered by integrating Flux into Barclays' Mobile Banking test app 'Launchpad' that has 40,000 live users, and is also working with merchants who are clients of Barclaycard's acquiring business.

Who doesn't like collecting and using points from purchases connected to loyalty programs? This element of the payments space has long been a powerful purchasing incentive, but it has not kept pace with innovations, such as contactless, which have removed friction from payments. Bink saw an opportunity to address this by giving customers a simple way to find and join new loyalty programs and to never miss out on their points and other benefits. Founded in 2015, Bink's Payment Linked Loyalty platform uses unique technology to allow customers to link payment cards to loyalty programs, enabling them to automatically collect points when they make a purchase, to easily identify and join new loyalty programs and to use their points simply by showing their payment card. Barclays took notice of this exciting new technology and invested in 2019 for good reason:

"This is another great example of how partnering with our technology colleagues and external FinTech partners allows us to really deliver exciting new enhancements for our customers while delivering a key differentiator for the bank. This is another step in our ambition to become the go-to money management service in the UK, with the Barclays and Barclaycard Apps playing a key role," says Milan Thakrar, Head of Product – Global Digital and Platforms Business.

Want to exchange ideas?

If you have any questions about partnering with Barclays on your game-changing technology, we'd love to hear from you. Please drop a note to LDN@thinkrise.com get the conversation going. ◆**TFT**

rise Created by BARCLAYS

How do you differentiate your service in a saturated market?

How do you differentiate your service in a saturated market?

Fintech markets, from the UK through to Hong Kong and the US have become highly competitive. With more choice than ever before, how do you stand out? Ryan Garner, Principal Customer and Product Lead at 11:FS, examines some of the factors involved.

In the UK consumer market, challengers like Monzo, Revolut and Transferwise have gained a strong foothold in terms of customer growth, valuations and general brand equity.

The number challengers in the SMB market have increased rapidly in the past couple of years too. There has been significant private investment in this market and the RBS Remedies fund will accelerate the growth and expansion for those winning the pots of funding.

Rewind three years and the market was very different, hugely commoditised and offered little choice to consumers.

Other markets around the world are beginning to accelerate too. Hong Kong is leading the South East Asian markets by issuing eight virtual banking licences with Malaysia, Singapore and Taiwan following suit. Australia, is following something close the UK model, encouraging competition and innovation through open data and APIs. There's lots of activity in the US from big tech, fintechs with some serious VC backing and the incumbent players.

If you're a challenger just starting out or thinking about entering the market how do you differentiate from existing offering? What were once revolutionary features like card freezing, real-time balances, budgeting tools and notifications are now table stakes.

Understand the Market Dynamics

Context is everything when it comes to understanding what customers want. Understanding the historical precedence, cultural forces and resonance of existing competitor propositions both inside and outside financial services are key.

Each market is defined by what preceded it. The shape and maturity of the financial infrastructure have a huge bearing on the expectations and needs of customers in that market. For example, a lot of South-East Asian markets have been largely cash-based until recently, which has led big tech in that region to pioneer digital payment methods to facilitate digital commerce through smartphones.

In the US, the lack of a faster payments network has led to the appeal of peer to peer payment platforms like Venmo. It's fair to say that each market has its own starting point so it's going to be fascinating to see how some of the UK fintechs handle the historical and cultural differences of the international markets they are expanding into.

Furthermore, understanding how customer demand changes when new supply (competitors) enters the market is really important. When customers are exposed to new services, they quickly become accustomed to them. They can now make positive change in their lives that they previously were unable to do. This shifts the whole market forward the drivers of demand in the market change.

In a market rapidly re-inventing itself it's critical to stay on top of the shifts in the market regarding how customers prioritise the financial jobs they're trying to get done. We have data to prove this too. In the UK, the most advanced in terms of the maturity of fintech, we can see underserved ideas or features rapidly becoming hygiene factors. The expectations of a growing number of customers who've adopted fintech services have been reset.

Identifying Partnerships

A classic Jobs to be Done analysis will identify who your product or service really competes with. If your product was not available what would a customer use instead? Asking that question reveals some amazing insights as to who your real competitors are.

Hint: they are probably not who you expect them to be.

This analysis reveals the job your product is being used for and helps define a strategy to compete more effectively. This analysis can also begin to identify partnership opportunities too. In the digital

ecosystem of 2019, success can be found by conducting the orchestra rather than playing all the instruments yourself.

Money is, more often than not, an enabler to something else rather than an end in and of itself. Therefore, those operating in financial services should be looking to connect into other areas of customers lives.

Money helps us buy a home, go on holiday, fund higher education, get married... the list goes on. Western markets are heavily financialised, which means that customers have a lot of more basic money management jobs to be done than customers in the East.

Financial Services in the East are either integrated with super apps (which do everything from messaging to hailing cabs) or new virtual banks partnering with retailers, telcos or other brands in different industries (see the announcements by the eight new virtual banks in Hong Kong for example). These are great examples of fintechs aiming to help customers do more with money and create new value in important areas of their lives.

There is definitely room in Western markets to orchestrate more partnership deals. It will enable propositions to be designed around end-to-end journeys that are relevant to customers everyday lives. And importantly for financial services brands, it will help differentiate in an increasingly noisy market.

Becoming culturally relevant

Some of the new digital challengers in fintech have done a great job redefining how banks speak to their customers, however, there is still a lot more to be done.

Brands that can decode cultural trends can align their propositions with meaningful areas of customers lives will be able to differentiate much more effectively. It is more than just saying you're "revolutionising banking" or that your proposition is focused on sustainability.

We saw the closure of Swell recently, which is a real shame because I really liked their proposition. Swell helped customers invest their money in impact stocks. The digital service was ethically driven, but the brand narrative never felt particularly strong. For example, they copy and pasted the UN's sustainable goals on their website without thinking about what this means and how this links to what they do.

I think Swell identified an underserved job in the market - customers wanting to invest their money in a sustainable and ethical way - but I don't think they had a strong enough narrative and connection with the big issues that surround this space.

If we look at non-financial brands like Patagonia, they sell sustainable products, but their brand connects with the issues of minimalism and environmentalism. Customers buy the product to fulfil a job to be done but they buy the brand to believe they're making a positive impact on the world.

Let's also look at Nike, their marketing is extremely brave and connects and shapes culture. What gives Nike the right to successfully sell branded hijabs to Muslim women? It's because they understand and connect with the latest trends in modern Muslim feminism.

Why is Nike still able to be super relevant to a young urban audience? Because it connects with the issues that matter most to youth culture. Supporting Colin Kaepernick was a masterstroke of marketing. History will look extremely favourably on the Kaepernick and the wider protest movement around racial injustice. Nike is, and will continue to be, strongly associated with that.

On purpose, with purpose

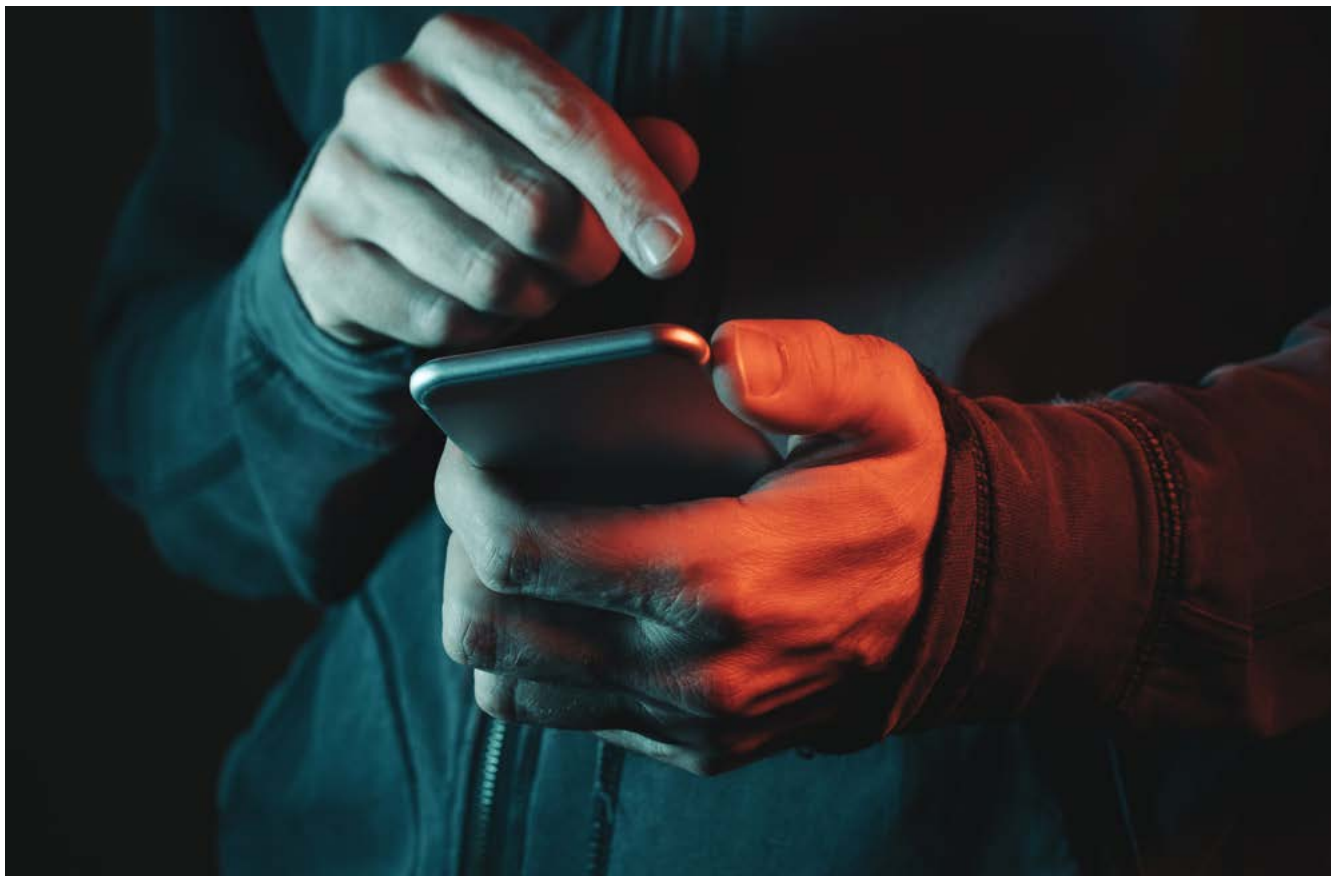
Differentiation comes from having a purpose. A purpose that is not just metaphorical but a purpose that is so strong you cannot disentangle culture from the brand. The brand becomes a metonym or a verb of the most important and meaningful parts of your customer's lives.

Fintech has a long way to go to reach these kinds of levels of sophistication, but this is the leap they need to make to drive growth and continue to differentiate and disrupt. Crucially, it will help them to design and build truly differentiated services that customers will love. ◆TFT

Best Line of Defense

With a rise of account takeovers and data breaches, it's time to reconsider using passwords, says Robert Prigge, Jumio president.

It's hard to go a week without the news of a large-scale data breach. Sadly, we've all grown a bit complacent when we hear these stories. But, each of these breaches has a ripple effect which has slowly chipped away at the collective online trust between consumers and modern enterprises. Organizations no longer trust consumers are who they claim to be and consumers do not trust organizations to keep their personal data safe.



What is an Account Takeover?

Account takeover (ATO) fraud is a type of identity theft where a bad actor gains unauthorized access to an account belonging to someone else — usually accomplished by using bots. A successful ATO attack usually results in fraudulent transactions and unauthorized shopping from the victim's compromised account.

How is ATO Performed?

Most often, the attacker will use lists of email addresses and passwords stolen en masse from hacked sites and then try those same credentials to see if they can gain access to online accounts.

There are a number of steps involved in a successful ATO attack:

Purchase Password Databases: Cybercriminals know users commonly reuse the same password across different services. Obtaining stolen credentials from the dark web is just the first step.

Credential Stuffing: The next step for the attacker is to test the stolen credentials against the target organization. These can be manual or automated attacks with bots using credential stuffing tactics.

Unlocking Accounts: Once the attacker has identified valid credentials for a user account, they can either fraudulently login to extract value for themselves or sell the working login to others.

Phishing Attacks: Often the data extracted from one account leads to more ATO and other forms of cyberattacks including password resets and phishing attacks.

API Exploits. Cybercriminals can feed a list of successful logins into apps that rely on application programming interfaces (APIs) from one of several personal financial data aggregators.

Prime ATO Targets

Fraudulent access to customer accounts has always been a concern for financial institutions, but today ATO attacks can affect any organization that relies on simple username and password for account logins. ATO targets regularly include gaming, technology, retail, restaurants, online travel and reward programs where a criminal tries to obtain products and services. In other scenarios, the criminal's goal is to collect personally identifying information to be used for other forms of fraud and identity theft. These types of attacks often target healthcare, the public sector and even academic institutions.

Safeguarding Against ATO Attacks

ATO takes advantage of the weaknesses created by your customers/users, which are more difficult to close. Businesses can impose additional security hurdles for users when they log into their accounts, but this often translates into more friction, which leads to increased abandonment. Unfortunately, even when the customer may be to blame for unauthorized access to their account, the organization is still held responsible by customers, the media and even in court.

Modern organizations, especially financial service organizations, need to take responsibility and develop alternative authentication mechanisms that balance the user experience with account takeover detection and deterrence. Jumio recommends a five-step strategy to defend against ATO attacks:

Turn to biometric authentication: Stopping ATO starts when a new account is created. Organizations need to thoroughly vet users during account opening with sound identity proofing technologies. This means going beyond credit bureau lookups and evolving towards biometric-based identity verification which relies on establishing a reliable trust anchor such as a government-issued ID (e.g. driver's license) and a corroborating selfie. Better biometric authentication solutions include certified liveness detection which ensures the user is physically present and detects advanced spoofing attacks (i.e., the use of a picture or video to impersonate a legitimate user).

Don't rely solely on passwords: Organizations must evolve past passwords because they're inherently vulnerable and enable ATO. Yes, this involves change, but tailwinds are making the transition from password to biometrics easier. Two-thirds (67%) of consumers are comfortable using biometric authentication today, while 87% say they'll be comfortable with these technologies in the near future. This trend has been accelerated by the broad adoption and familiarity of facial recognition integrated within the most popular smartphones (e.g., Apple Face ID and Samsung's facial recognition feature).

Educate your users: Because consumers routinely recycle the same password across multiple websites, we're unintentionally simplifying the job of today's cybercriminal. Only 1% of people know and care that passwords have patterns and those patterns can be tracked or broken (Source: Preempt, March 2017). This suggests the need for consumer education on a massive scale. Educate your online ecosystem and help them recognize these spear-phishing and social engineering attacks, understand their fraudulent nature, and know how to report them.

Take an adaptive risk approach: A multi-layered security approach is the best way to minimize the risk of a financial institution's customers falling victim to account takeover fraud. This approach brings together several solutions that protect bank operations and customers without any negative effect on user experience including accurate identity verification, biometric authentication, transaction monitoring and anomaly detection.

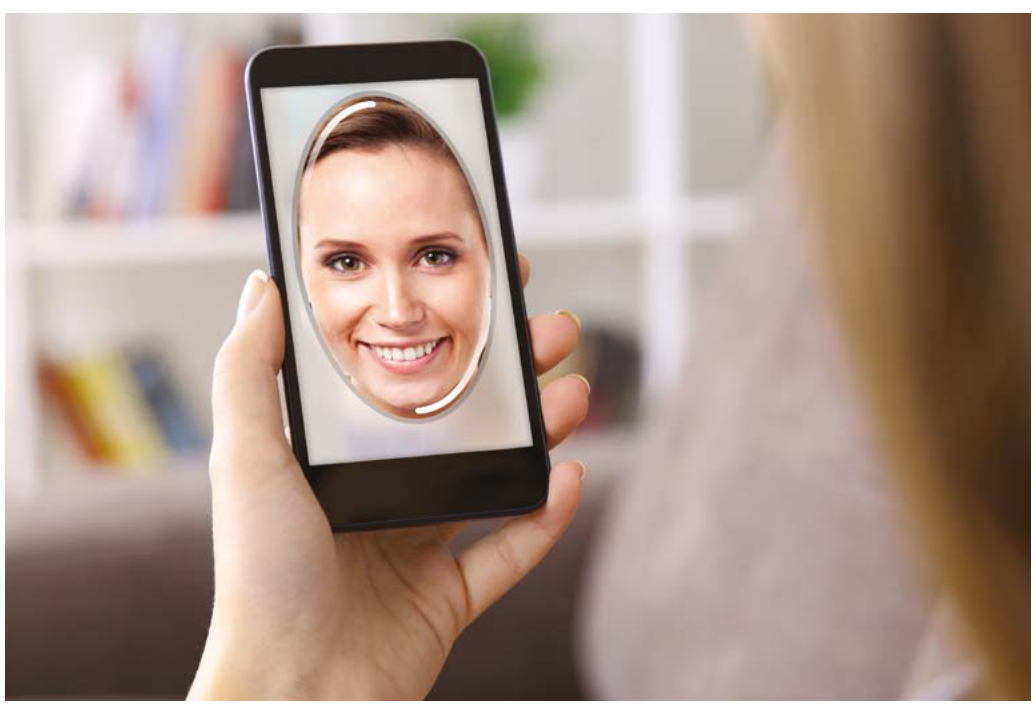
Pay attention to fraud signals. There are a number of fraud signals that, if noticed, can help detect ATO attacks. For example, if a customer is logging in from an unauthorized device or location (IP address), that's a fraud signal. If a user is using proxies, VPNs and cloud-hosting services to evade IP blacklists, that's a fraud signal. Modern enterprises need modern tools to defeat armies of bots used to test millions of stolen credentials and access protected accounts.

ATO has become rife across consumers' digital lives, with hackers using phishing, credential stuffing and brute force techniques to crack everything from email inboxes to Uber and Netflix accounts. ATO shows no sign of slowing as evidenced by the daily barrage of data breaches (many of which include the theft of usernames and passwords) and the parallel growth in the dark web and cyber toolkits to perpetrate attacks via bots.

Companies need to reconsider the password as their go-to authentication methodology.

We need to start building in the necessary safeguards to more reliably ensure that the user logging in is the actual account owner and not a fraudster impersonating that user with stolen login credentials. The good news is that today's users are getting more comfortable and familiar with biometrics, as are CIOs — 86% of CIO, CISO and security VPs would abandon password authentication if they could (Source: MobileIron study conducted by IDG, 2019)

In this era of no trust, it's not surprising that companies are starting to pay more than lip service to online security and alternative authentication methods. While conventional wisdom holds that consumers will value speed over all else, more and more consumers are placing a premium on security and prioritizing it as a must-have feature for protecting their online accounts.. ◆TFT



AT A GLANCE

When identity matters, trust Jumio. Jumio's mission is to make the internet a safer place by protecting the ecosystems of businesses through cutting-edge online identity verification and authentication services that quickly and accurately connect a person's online and real-world identities. Jumio's end-to-end identity verification solutions fight fraud, maintain compliance and onboard good customers faster.

Leveraging advanced technology including augmented intelligence, AI, biometrics, machine learning, certified 3D liveness detection and human review, Jumio helps organizations meet regulatory compliance including KYC, AML and GDPR and definitively establish the digital identity of their customers. Jumio has verified more than 200 million identities issued by over 200 countries and territories from real-time web and mobile transactions. Jumio's solutions are used by leading companies in the financial services, sharing economy, digital currency, retail, travel and online gaming sectors. Based in Palo Alto, Jumio operates globally with offices in North America, Latin America, Europe and Asia Pacific and has been the recipient of numerous awards for innovation.

For more information, please visit www.jumio.com.

"If you liked us before, you're going to LOVE us now..."

SmartStream's CEO Haytham Kaddoura discusses AI strategies, technology innovation and 'game-changing' new products

For nearly three decades, SmartStream has been at the forefront of innovation in reconciliation software solutions, evolving its offering over the years into areas, such as cash and liquidity management, corporate actions and expense management.

Headquartered in the UK, with staff deployed across 20 global offices, SmartStream's base of 2,000-plus customers includes more than 70 of the world's top 100 banks alongside leading asset managers, custodians and broker dealers.

Innovation with a purpose is important to SmartStream. In 2018 it established a research engine room in Vienna, employing a mix of data scientists, mathematicians, computer scientists to design and develop artificial intelligence (AI), machine learning and blockchain technologies and data driven solutions that deliver better business outcomes.

The SmartStream Innovation Lab is the 'baby' of Haytham Kaddoura –CEO of the company for three years and a member of its board of directors since 2007 – who wanted technology to be developed in full cognisance of it impact.

He explains that by 'monitoring, watching and learning', SmartStream is now in the position to introduce new products to the market that will be like 'nothing else anyone has done before'.

"Everyone is talking about artificial intelligence and AI has become the watchword in business. We have seen a lot of people say they have AI, but at SmartStream we've had artificial intelligence for years, even before this term was coined. It's what we specialise in," says Kaddoura.

"The difference is that we have actual solutions. Everything we come out is purpose built, it has AI in it but because it needs to be in it, and because it makes a difference. For us, it's not important to be first, but to be the best."

"So, anything we do is the result of years of research and development with valuable insight and intelligence from our clients and partners. Through artificial intelligence we can identify patterns and behaviours, improve response times and spot any anomalies in transactions to provide customised offerings to customers."

According to SmartStream, data scientists at its Innovation Lab have been working closely with banks that increasingly want high levels of automation and greater control of their risks and operations to develop and assess new products that go beyond the conventional way of processing data to ultimately drive down costs, improve profit efficiency and boost workflow efficiencies..

At Sibos, SmartStream will launch three of these products with Kaddoura confident that it is better to be a 'teeny bit late to the party' in order 'to get things right'.

"We have a solid foundation with a lot of our clients who rely on us for their strategic direction and for our level of assurance. So, we really wanted to assess all the hype before stepping into this space so what we do is right the first time and not just hopping on the bandwagon. What we are presenting at Sibos has been developed for quite a while and has already been verified with financial institutions and we know they are going to be real game changers. If you liked us before, then you're going to love us now."

SmartStream describes its products debuting at Sibos 2019

AIR

AIR (artificial intelligence in reconciliation) is cloud-native and universal. The AI algorithms can reconcile any data structure and it is agnostic to data form and structure, and be used instantly (Cloud-native SaaS solution, secure, globally available, no installation, no onboarding, access within minutes, instantly demo-able with automatic configuration (the AI algorithms will auto-configure the reconciliation, end-to-end in seconds). The matching results are immediate, exceptions can be followed up after a few seconds - faster than any other solution- it's simple to use with a new user interface and AI technology that will give new users instant results and it is multi-lingual (the software is designed to be easily translated into any language).

Managed Services with AI

AI looks at exceptions and identifies opportunities to improve auto-matching, reduces the amount of manual effort required by users performing reconciliations, reduces the number of exceptions feeding to client(s)'s organisation for review and resolution, reduces the number of exceptions feeding regulatory reporting e.g. FCA's CASS reporting, Risk Weighted Asset Calculations etc, and improves operational risk accuracy within an organisation by continuously monitoring and controlling.

Digital Payments Control

This is SmartStream's first product within its Aurora suite of solutions aimed at the mid-tier market. It delivers a state-of-the-art post swipe/post tap operational control centre, that allows users to focus on disputes and turn-around-time which has a direct impact on the customer experience. The AI matching is integrated, fully scalable, high-volume capability, PCI compliant, and covers all digital payment instruments from ATM, credit/debit card, mobile, wallets, and Open Banking. It also includes net settlement and transaction billing controls, integrates with SmartStream's Fees and Expense Management solution to provide full control over card fees and billing, including schemas and new analytics to provide insight to where the business stands, and will improve compliance and auditing of PSD2 transactions.

SmartStream will be at exhibition stand Q131 at Sibos 2019 and will be providing an update on the status and developments of its current suite of solutions and how digital strategies can benefit from AI.

AT A GLANCE

COMPANY: SmartStream

FOUNDED: 2000

CATEGORY: Financial software and managed services

KEY PERSONNEL: Haytham Kadoura, CEO

HEAD OFFICE: London

PRESENCE IN: EU, United States, Australia, Canada, China, Hong Kong, Japan, Africa, Zwolle, Saudi Arabia, Singapore, South Africa, Switzerland, Dubai

TEL: +44 (0)207 898 0600

WEBSITE: smartstream-stp.com

LINKEDIN: SmartStream Technologies

TWITTER: @smartstream_stp

SmartStream

WHO WE ARE

Form3 was established to meet the challenge of making payments easier, faster and cheaper.

We love creating payments solutions that combine the latest technology with banking expertise to offer our clients choice. Working with both regulated fintechs and established banks, we caredeeply about crafting elegant business models, APIs and documentation.

Our Cloud technology provides a streamlined, end-to-end payments-as-a-service platform, delivered via a unique payment API.

COMPANY: Form3

FOUNDED: 2016

CATEGORY: Payments

KEY PERSONNEL: Mike Walters, Chief Product Officer (above)

HEAD OFFICE: London

TEL: +44 (0)20 3861 6489

WEBSITE: www.form3.tech

LINKEDIN: Linkedin/company/Form3

TWITTER: @Form3Tech

WHAT WE DO

Help banks and regulated fintechs move money faster

FORM3
FINANCIAL CLOUD

Bridging the divide:

Ensuring financial inclusion for SMEs globally

SMEs are a vital group to the health of the global economy, but they are largely still underserved when it comes to flexible payments services.

Access to faster payment services and real-time transaction processing through existing corporate and retail banking offerings is limited and many businesses are still waiting until the next day for the previous days' card takings.

In a world where time waits for no-one, it is critical that SMEs are able to access and move money on demand so they can better manage cash flow, pay staff and suppliers promptly and reinvest into the business for growth.

Form3 is on a mission to make payments faster, easier and more cost effective for the global financial community. They provide banks and regulated fin-techs globally simple access to multiple payment schemes including UK (FPS), European (SEPA) and International payment schemes via a single API.

Driven by the desire to help widen financial inclusion and ensure accessibility for all, Form3 is lowering barriers and opening up scheme access so that all financial institutions are able to provide better services to their customers.

There were 5.7 million SMEs in the UK in 2018 contributing 47 per cent of revenue to the UK economy.

Disrupting for good

Several new challenger banks have been quick to 'undo' the incumbent nature of payments from traditional retail banks and lead the charge on delivering instant payments to their customers while improving the overall digital experience.

Merchant service providers are working hardto help SME's tackle financial barriers to growth and development enabling commerce to be easier and more cost effective. Providers such as Square work with Form3 to deliver access to real-time payments in the UK and Europe, expanding their global support fo rlocal merchants wanting instant access to funds. N26 is another example where making financial life easier is core to their digital banking approach.

N26 is working with Form3 to enable their usersto make and receive faster Payments in milliseconds allowing them to compete with Tier 1 banks.

◆TFT

5.7 million

48% UK Revenue

There were 5.7 million SMEs in the UK in 2018 contributing 47 per cent of revenue to the UK economy.

Scaling for international payments?

Don't let legacy technology restrict you from progress.

Provide your customers with access to International Payments (pay in and pay out) FX and Trade Finance and settle in up to 140 currencies globally.

No need to manage multiple technology partners or build your own banking network, trust Form3 to manage everything for you.

In addition, provide preferential payment and collection capability using the same API.

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FINANCIAL CLOUD

Taming the Data Demon

The future of digital payments is the New Frontier; the financial world's Wild, Wild, West. What lies beyond is exciting, new, and adventurous, but the underlying truth is the fear that comes with The Unknown.

By **Micah Fowler**,
Strategic Alliances Manager, DataSeers

The payments industry is growing. Every year sees new and disruptive innovation. Payments and the means from which they originate get faster; the transactions themselves get easier. But what happens on the backend has banks and payment companies scrambling to keep up. Bytes of data are created by the quintillions each and every day and the sheer volume alone is becoming overwhelming. Data formats, speeds, and varying levels of accuracy continue to add to the toxic complexity that defines the payments space. Data service vendors seem to be a dime a dozen now, offering solutions to one data problem or the next. Compliance issues? There's a provider for that. Fraud? There's someone for that, too. But with so many companies supplying services to cover your different individual needs, how do you ensure quality and homogeneity throughout your data? After all, poor data input begets a poor data output.

DataSeers, an Atlanta-based fintech focused solely on the banking and payments industry, is redefining how you see your data. Thanks to a valuable partnership with one of America's most trusted database corporations, LexisNexis® Risk Solutions., DataSeers has been able to offer exemplary data services, including but not limited to: data augmentation, trusted KYC/KYB checks and onboarding, and thorough sanctions monitoring. In fact, DataSeers has gone so far as to bring all four back office services of reconciliation, compliance, fraud, and analytics under one highly functioning data software appliance. DataSeers allows you to streamline and monitor your payments from end to end. The aforementioned product, known as FinanSeer, undertakes a process referred to as CHILAD, in which payments data is cleaned, homogenized, ingested, labeled, augmented, and then distributed to the system's four 'Seers': ReconSeer, ComplianSeer, FraudSeer, and StrataSeer.

These Seer engines use machine learning and AI to complete the assigned processes with an unprecedentedly high degree of accuracy while simultaneously learning and self-improving. The ReconSeer engine leads the charge with a complete 3-way reconciliation of cards and accounts. This rule-based Seer operates at speeds that put DataSeers' competitors to shame. With ReconSeer, millions of records can be settled with ease in just a matter of seconds. The highly customizable ComplianSeer uses both rule-based and behavior-based monitoring to oversee all aspects of compliance, such as BSA/AML. This Seer monitors data anomalies for potential UDAAP violations, HIFCA, HIDTA, OFAC/PEP sanctions and more. Financial Institutions can even use FinanSeer's compliance engine to submit FinCEN 314a and 314b reports.

Digital payments, whether they initiate via wallet, card or online, are wrought with the potential for fraud. Criminals are smart and as technology advances, so do their tools. FinanSeer's FraudSeer engine is prepped and ready to play defense. The Seer's machine learning aspects even provide the opportunity for FI's and payment companies to go beyond the defensive and become their own best offense by identifying and flagging behaviors reminiscent of fraudulent preparation. Imagine, potentially spotting financial fraud before it can affect the bottom line!

At the final step, all the analyzed data is collected and displayed within the StrataSeer – FinanSeer's analytics engine – before being made available on the user-friendly SeerPortal. This central repository provides DataSeers' customers with complete control of their case, cluster, user, and rule management, not to mention unobstructed access to Seer reports and dashboard visualizations.

FinanSeer is making waves within the industry as the first third-party provider of not one, not two, not three, but all four of the most vital payments data services in one platform. Gone are the days of multiple vendor utilization and uncertain data outcomes. A one-stop-shop is now available, and thus is able ensure a quality data output. A payment company's data – when properly harnessed – is its greatest and most valuable asset. That complex mess of data truly is manageable with the right solution, and FinanSeer is 'Taming the Data Demon'.

Now is an exciting time for DataSeers as they have just announced the newest, completely enhanced 2.0 version of FinanSeer. The improved platform is now 10x faster than its predecessor, supports multitenancy, and has a brand-new UI. In addition, the upgraded FinanSeer has full integrations with LexisNexis® Risk Solutions. Risk Solutions and will support more security and encryption options. This new DataSeers' product offers a full real-time interface which will allow for even more precise results.

"This is our second-generation release and we are very excited about it. It's not only fast but has improved algorithms that have learned from billions of transactions. New UI, new integrations, and a full real time interface makes it a unique product for the market.", explains Adwait Joshi, founder and CEO of DataSeers.

Clients of DataSeers are singing its praises. While results can vary, one particular client reports a 75% reduction in the time required to onboard new clients and an increase in prepaid business by nearly 100% since implementing FinanSeer.

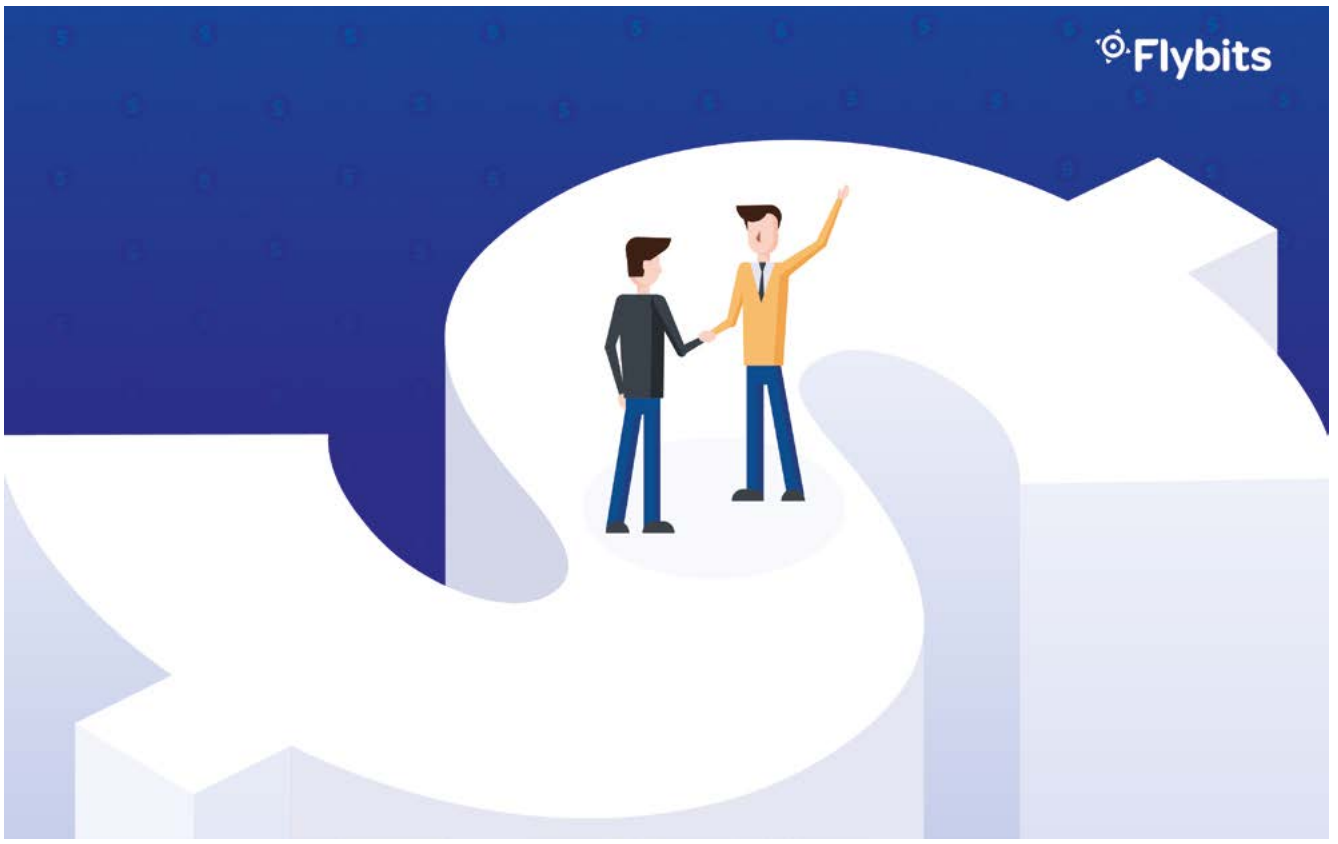
In addition to funds saved on fraud and compliance violation prevention, clients are greatly improving employee efficiency – often reporting a 10-fold increase in the number of accounts able to be handled by individual employees. Jeff Lewis, VP of Prepaid Services at Sutton Bank in Ohio, states, "Previously, to manage our customer base, we estimated one employee for 500,000 end-user accounts. With FinanSeer, that statistic has improved to five million accounts per employee. Our response time to solving problems flagged by the FinanSeer platform is now so fast we're now spotting and fixing problems with incoming transactions before our customers do. That wasn't possible before we started using the FinanSeer appliance, and it's a key competitive differentiator for us."

DataSeers simplifies its clients lives by giving them back control of their most unruly resource. Lower your stress, increase your efficiency, save your money and see through your data...with DataSeers.
◆TFT

A revolution in banking experience, is putting data to work to transform customer engagement

Data driven tech is embedded in every facet of modern life. Through their concierge services, platforms such as Netflix, Uber, Amazon, and Google shape how consumers digitally interact with the world around them. These companies have set high benchmarks for consumer expectations for personalization and predictive recommendations — benchmarks that consumers also want from their financial institution.

To compete and stay relevant in the face of change, financial institutions must revitalise both the range and richness of services they offer consumers. Today we witness banks innovating around the themes of Lifestyle banking, AI-driven smart offers, and contextually driven financial insights. However, in the face of mounting competition financial institutions must go a step further to stand out from the crowd. Banks need to find ways to ensure they engage the customer in compelling ways, that are genuinely timely and helpful. Through this lens, leveraging contextual intelligence and layering it on to proprietary data to deliver hyper-personalized customer experiences, isn't a "nice to have", but rather critical to the successful execution of modern banking strategies. As a multitude of banks will attest, to achieve this in a timely and scalable manner, banks need to partner with innovative fintechs, who have solved the constituent parts of the engagement challenge. It is only by leveraging innovation that has demonstrated its capability on the global stage, that banks can avoid the trap of "in-house" builds, which while theoretically viable, almost inevitably result in an underwhelming performance and overwhelming delivery time and price tag.



When Banks and Fintech Collaborate

Collaborations between fintech and legacy banks have blossomed over the last few years, with banks rightly seeing fintechs as enablers, rather than competitors. This new banking mindset is unlocking the door to predictive, personalized products and services will lie at the heart of the elevated banking experience. Yesterday's vision is already turning into today's reality.

Imagine if you could surprise and delight a customer with an offer based on their proximity to a shop they frequent, identify that a customer is traveling and provide suggestions and discounts on local attractions or popular restaurants, and even provide non-traditional services like proactively notifying consumers of delays in their commutes. Technology that can read and act on data in real time can do that and more. From recommending investment products to customers with rising incomes to recognizing optimal times to directly engage with customers, banks have a world of possibilities ahead.

To see an example of how successful this type of partnership can be, one need look no further than the work TD Bank (a top 10 US bank) is doing with Flybits.

TD recognized the unique position they were in as a trusted partner of their consumers and saw an opportunity to become a go-to source for value-added services that would positively impact their customers' lives. In partnering with Flybits, TD developed the TD for Me digital concierge which leverages contextual intelligence to offer customers predictive, personalized experiences that make their lives easier and help them achieve their goals in real time. For example, TD can connect a customer with a mobile mortgage specialist when they are at a condo sales centre and don't already have a mortgage with the bank. Providing customers with the experiences they need in the moment when they need it has allowed TD to stay ahead of the curve on customer expectations. This has kept the TD mobile app #1 in customer engagement among retail banking apps in Canada, according to Silicon Valley-based market data firm, App Annie. Technological innovation is the banking battleground of the present and near future. Consumers want new and better services more specifically tailored to their needs and goals. To provide this, banks must explore the new possibilities offered by fintech innovation. Daunting as it may seem, making this technological shift doesn't necessitate a full-scale infrastructure revamp. Rather, it requires careful consideration of the fintech partnerships that are made in the process. Specifically, solutions that can work with your organization by plugging directly into your bank's existing infrastructure ensure a quicker time to market, allowing you to provide better customer experiences and see improved ROI sooner. ◆TFT

AT A GLANCE

WHO WE ARE:
The Flybits Platform combines contextually aware computing and machine learning technologies, to enable clients to better engage their customers. In essence, getting the right content to the right customers at the right time.

COMPANY: Flybits

FOUNDED: 2013

CATEGORY: Digital Customer Engagement

KEY PERSONNEL: Hossein Rahnama, CEO (above)

HEAD OFFICE: Toronto

PRESENCE IN: London, New York, Dubai, Redwood City

INVESTORS POST SERIES C: Point 72 Ventures, Mastercard, Citi Ventures, Reinventure

WEBSITE: www.flybits.com

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Flybits

WELCOME TO FINTECH CONNECT

On 3-4 December, the UK's biggest fintech event returns to London for its fifth year. More delegates, more first class tech exhibitors and more thought leading conference content than ever before comes to FinTech Connect 2019.

Following a similar format to previous editions, FinTech Connect is made up of 5 co-located conferences. 4 theme specific tracks in PayTech, RegTech, Blockchain, Digital Transformation and the invite only FinTech Founders Forum bring the fintech ecosystem under one roof.

As people begin their Christmas tree shopping and your mum starts frantically searching for her posh bauble collection, we bring the industry's leading lights together in a fintech oasis away from the chaos of Christmas. Neobanks, incumbents, fintechs and merchants will converge on the ExCeL London this December, as the ecosystem deep dives and discusses the lay of the land.

This year, we're excited to announce we are partnered with the architects of the year's definitive guide to the most influential and innovative companies, the Fintech Power 50. Taking place at the end of the first day of FinTech Connect, the Fintech Power 50 will announce their top 40 of the year's most important fintechs, alongside 10 of 2019's top influencers. Beginning in 2018, this year's edition is the organisation's second cohort of trailblazers in the fintech space. Don't miss the announcement, on 3 December at FinTech Connect.

At the beginning of preparations, in January, we set a major focus of ours as the output of quality content all year round, up to and including the endpoint that is FinTech Connect. We wanted to position ourselves not just as industry thought facilitators, but industry thought leaders.

Alongside whisking out original editorial pieces (such as The Fintech History Book series) via our fortnightly newsletter, we produced a series of industry reports. At the beginning of the summer we set to surveying the fintech community about the pace of change and innovation in each of our four theme specific conferences. FinTech Connect is not just for Christmas.

50,000 fintech and merchant professionals received these surveys, and we dissected and discussed the responses in a series of FinTech Connect Adoption Guides. The event in December will further explore The Adoption Guides' talking points, as the conversation moves from paper to stage. But for now, to warm the palette up in anticipation, here's a quick roundup of our FinTech Connect Adoption Guides 2019.

The plate tectonics of the payments ecosystem are shifting. Cash has had its day, cards replaced cash, and now a host of alternative payment methods vie to take up the mantle. The PayTech Connect Adoption Guide survey asked a targeted group of professionals from payment institutions and merchant brands to assess the impact that technology is having on their organisations.

Covering a range of opportunities and challenges in the payment space, the report looks at how they're influencing policy and customer relationships. From Strong Customer Authentication and open banking to technical innovation and Brexit, The PayTech Adoption Guide represented the first in a new series of comprehensive industry reports conceived and produced by FinTech Connect.

Hot on its heels was The Digital Banking Adoption Guide. The last decade has seen tech savvy fintechs increasingly challenge and compete with the financial stalwarts entrenched by centuries of dominance. Our survey asked the financial industry how it was engaging with technology just over a decade on from the foundation of fintech, the 2008 financial crash. The Digital Banking Adoption Guide untangles and delves deep into the folds of these findings.

The report features perspectives on the rise of the challenger bank, incumbent fight back, and their relationship with technology.

Consumer demands are shifting, regulation is changing and financial institutions must offer digital financial products to stay competitive. The Digital Banking Adoption Guide begun the FinTech Connect digital transformation discussion. The conversation will continue on the two digital transformation stages at the ExCeL London on 3-4 December.

Commentators and analysts are beginning to ask if 'the year of the blockchain' that has been frequently promised by crypto evangelists will ever really arrive. The regulatory and take up risks of blockchain are creating an environment that causes a number of financial institutions to adopt a wait and see policy. But it's not over until the fat lady sings. And she hasn't even begun warming up her vocal chords yet.

The Blockchain in Financial Services Guide reports and discusses financial institution and fintech perspectives on blockchain in the context of the current climate of tentativeness towards it. But blockchain isn't dead in the water. The technology is evolving quickly, becoming safer and more reliable. The guide discusses how the blockchain landscape is shaping up and perceptions that are influencing the take up of the technology. Swing on by the Blockchain Connect stage at the event in December and get involved in the conversation.

Innovation and regulation are not words that have commonly gone together. But, that view is becoming old fashioned. The Regtech Adoption Guide assesses an ecosystem where regulation has caught up with innovation. Open banking is a great example of this. Innovation facilitated by regulation.

Regtech is a double sided coin. On the one side is compliance and on the other is prevention. As financial institutions become ever more sophisticated, so do the nefarious actors seeking to undermine them. Banks and fintechs play a game of cat and mouse with security threats and The Regtech Adoption Guide reports on the industry perspectives towards the uptake of regulation and security technology. The industry's leading lights will be debating all things regtech on the very aptly named RegTech Connect stage at FinTech Connect.

FinTech Connect is the place where the conversations that have been getting louder throughout the year come home to roost. 5 ticketed conference tracks continue the discussions that the industry has been pawing over for the past year. An exhibition with 150 plus best in class fintechs showcases the most innovative global technology solutions. At the heart of the show floor lies the Startup LaunchPad. Emphasising our commitment to promote new fintech blood, the LaunchPad is a stage where startups have 10 minutes to pitch their product.

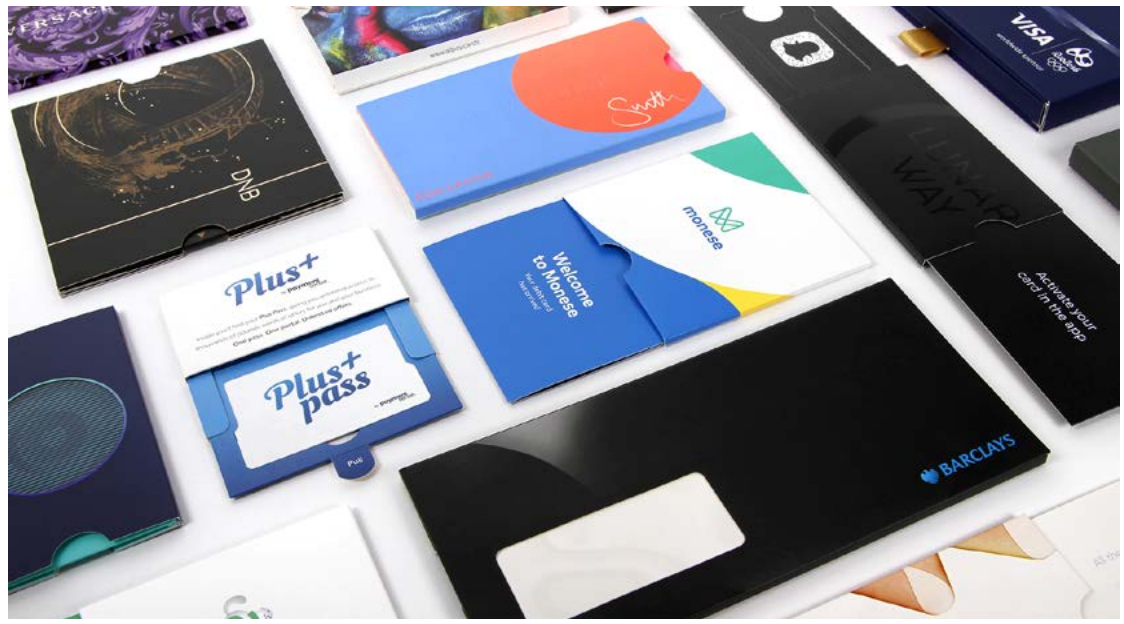
Join us at the UK's biggest fintech event, and register at the link overleaf.

FinTech CONNECT
3 - 4 December 2019 | ExCeL London

The Value of Remaining Tangible in a Digital World

In many ways Fintechs have redefined perceptions of what a bank is and what it means to its customers. Right from the start, their razor-sharp marketeers realised that the answer wasn't in offering better interest rates or other fiscal incentives, it was about putting people at the centre of their brand. Not customers and demographics but individuals and communities. It was about building brands and services that focussed on lifestyle, convenience and positive aspirational values.

Today, customer experience has become perhaps the single most important focus for digital banks. Huge amounts of time, energy and investment have been poured into optimising digital apps, activation, support services and card distribution. But in the world of digital banking where so many aspects have become less tangible, the physical card and its packaging have also become important vehicles not only for physical engagement but for cementing brand values and welcoming people into the fold. In this industry, the plastic card isn't just a bank card, it's a membership card and in the absence of a handshake the way it is presented through it's packaging fundamentally defines the first, 'hello, welcome to the club'.



Packaging with opening mechanisms that delight, inform and elicit a true 'wow factor' have become very popular in this space. They offer a great brand experience and also act as a powerful marketing tool for social media marketing. We all seem driven to share the things we find most beautiful and packaging has become a personal billboard for the influencer in us all and it gives brands the potential to reach far beyond their own sphere of influence. In a world where advertising is almost inescapable, the result is mass-exposure but in a way that feels more subtle and based on choice (we choose who we follow and what we search for) and this helps consumers to retain a sense of control.

Most recently the design team at Burgopak have been working hard on a new 'Optimised' range of products that combines the 'wow factor' of their most popular formats (and some new additions) with a carefully researched and sympathetically embedded focus on optimising each part of the supply-chain including production, shipping, fulfilment and postage.

Each format has been painstakingly stripped-back to reduce materials, water and energy consumption, and assembly time. A number of the formats also have the option for an integrated seal-and-tear strip negating the requirement for an additional envelope and speeding up the fulfilment process. Designed specifically for plastic card products, tickets, invites and other flat media, the range can be adapted and resized to suit specific requirements.

With up to 25% less material, 70% less glue, 300ml less water and 150Watts less energy required to produce each pack, the net result is not only an obvious reduction in cost but also a considerable reduction in the environmental footprint. It is a body of work that whole-heartedly subscribes to the philosophy of perhaps the greatest industrial design of our age, Dieter Rams, 'Less, but better'. ◆TFT