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Financial IT

Innovations in FinTech

THE RISKS OF OPEN BANKING FOR CORPORATE TREASURY

Phil Boland,
Managing Director – Cash Management Solutions,
Gresham Technologies

ING COOPERATES WITH FINTECHS TO CREATE A DIFFERENTIATING CUSTOMER EXPERIENCE

Mark Buitenhek,
Global Head of Transaction Services,
ING

BANKING WHICH IS INTELLIGENT, SUSTAINABLE AND DIGITAL

Nicholas Brewer,
Product Marketing Director,
Temenos

Amr Soliman,
CEO, Corzap

MAKING **SWIFT gpi** ACCESSIBLE TO ALL BANKS


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23 - 26 Sep 2019

MAKING OPEN BANKING EASIER FOR BANKS…

…AND PROVIDING OPPORTUNITIES FOR MANY FINTECHS

This Editor-in-Chief's letter is being written on Saturday 14 September 2019.

The date is important, because it is the deadline, incorporated in the revised Payments Services Directive (PSD2) of the European Union (EU) for the introduction of Strong Customer Authentication (SCA).

With few exceptions, SCA applies to payment services providers (PSPs) when they are carrying out remote electronic transactions. SCA is defined in PSD2 as an 'authentication based on the use of two or more elements categorised as knowledge (something only the user knows), possession (something only the user possesses) and inherence (something the user is) that are independent, in that the breach of one does not compromise the reliability of the others, and is designed in such a way as to protect the confidentiality of the authentication data.'

Nearly three months ago, The European Banking Authority (EBA) published an opinion which recognised the challenges of putting SCA into practice by the deadline - and especially as it involves actors who are not PSPs*. The EBA's opinion focuses on one aspect of a broader question - How can Open Banking be made easier for banks? This broader question runs through every one of the articles and interviews that are included in this edition of Financial IT.

One of our contributors has helpfully defined Open Banking - the central feature of PSD2 - as 'the secure way to give providers access to your financial information.' Other contributors consider details such as changes that area being brought in by SWIFT, the impact of Open Banking on Islamic banks and other financial institutions in emerging markets, the role of Artificial Intelligence (AI), the challenges of securing data, and the impact of payments on online marketplaces.

Some of our contributors consider Open Banking in a strategic way. How can a bank put digitization and Open Banking at the heart of its overall business model? In different ways, all our contributors reach the same conclusion. Wherever they can, the banks themselves must innovate. In other circumstances, they must forge partnerships with external companies that can help them to deliver the best outcomes for their customers.

Often, those external companies will be Fintechs. For the first time, SWIFT has invited developers to Sibos in London for a 'hackathon that will explore the possibilities of open banking. The aim is to challenge developers to work together to build inventive mashup applications, that use multiple organisations' APIs and have real-world uses.'

APIs, PSD2 and Open Banking have been discussed many times in previous editions of Financial IT. This is the first edition which has been entirely devoted to Open Banking. We hope that you will agree that the whole is, therefore, greater than the sum of the parts.

Finally, we trust that all participants at Sibos 2019 have a successful conference.

by Andrew Hutchings, Editor-In-Chief, Financial IT

* https://eba.europa.eu/-/eba-publishes-an-opinion-on-the-elements-of-strong-customer-authentication-under-psd2

Financial IT
Innovations in FinTech

ISSN 2050-9855

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UNBANKED – THEY DON'T NEED BANKS!

It's SIBOS!! For me this the best time of my year. I have been to 17 of the last 22 SIBOS's. For some, their event is the Super Bowl, the Olympics or FIBA Basketball Championship or for many more it's the World Cup, but me, SIBOS is my Super Bowl.

This year many people are talking about SWIFT falling behind, at the end of its life or just plain obsolete. I think that SWIFT suffers from the consortium of banks that are afraid of what the future needs. If they were to let SWIFT loose, SWIFT could easily be one of the most dynamic FinTech's globally.

I am not here to talk about what SWIFT is or isn't today as most are. I hear to much every day of new way banks and credit card companies can and want to help the unbanked.

I am not buying it. I have been spending time in Africa and South East Asia. People there do not use banks or credit cards, not because they are left out, but simply that they do not need to. Their economic community has done without banks, so who says they need banks now. I know many people that spout out about the unbanked are left out of the economy. They are not, they have a different system, so why force them into a system that will cost them fees they cannot afford to give up. Credit card companies are highly interested in the estimated 1.5 billion unbanked people, but not – as they say – to advance them into the world's financial system. Their motives are strictly profits. For the banks and credit card companies are living in saturated markets – where they literally need young adults to turn 18 so that they can get new customers and make more fee and interest income. When they think about the unbanked, they only see what fee generation would be if they were able to bank everyone and put a credit card in each of those approximately 1.5 billion unbanked pockets.

What is so very sad is that we are talking about people whose income is between $50 and maybe $200 per month. The very idea that banks and credit card companies want to take 3, 4 or 5% from them is at least immoral and should be considered criminal.

It's simple. The unbanked need a simple way (costing pennies) to pay and get paid using a mobile phone that is cheap and easy. The argument ends there. There is no place for bank fees or credit card interest rates – not today or ever. Leave the unbanked with the ability to do without our costly financial system. Give them technology that gives them a better way to survive that does not look at them as a source of new blood income as the banks and credit card companies do. We can help the unbanked but not by taking from them. Maybe a SWIFTCoin is the answer.

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COVER STORY

INNOVATION CORNER

DIRECTORIES

PUBLISHER'S LETTER

LEAD STORY

INTERVIEW

FEATURED STORY

OPEN BANKING NEEDS OPEN THINKING

Interview with Sean Sarginson, Head of Innovation at SWIFT

As we approach Sibos 2019, the world's premier financial services event, we caught up with Sean Sarginson, Head of Innovation at SWIFT, to talk about what's in store for the developer community at Sibos and how open banking is fundamentally changing the financial sector.

Financial IT: Why are you inviting developers to Sibos 2019?

Sean Sarginson: While you may not often see them at your traditional financial services events, developers play an integral role in all of the products and services we use across the financial industry. So, we're breaking that mould and inviting developers to Sibos 2019 in London to join a first-of-its-kind hackathon that will explore the possibilities of open banking. The aim is to challenge developers to work together to build inventive mashup applications, that use multiple organisations' APIs and have real-world uses.

It's very much a two-way street. We want to immerse developers in the Sibos experience, get them thinking about the challenges facing the industry, and expose them to the latest tech and business trends. At the same time, we want businesses to understand what technologists can do and their creative processes – not just within one firm, but across companies and industries.

We don't know exactly what the teams will create at the hackathon – that's part of what makes it exciting. It's open to developers from all backgrounds and at all levels. Participants will have access to expert support, from SWIFT and the wide range of Sibos exhibitors.

Financial IT: How is open banking changing the way financial institutions think about service delivery?

Sean Sarginson: Until very recently, incumbent financial firms have been very product and process centric. Any company that has been around for a while, and is of a certain size will be – it's unavoidable. You also tend to succumb to a reverse Conway law where your organisational structure starts fitting the design of your legacy systems, rather than the technology acting as a facilitator for service improvement.

Open banking and APIs allow companies access to data previously locked up in other companies' software systems – meaning, with the customers' permission, data can be shared across organisations. This has huge potential. We can finally break down the barriers between business and IT silos and design much more flexible organisational structures that react rapidly to customer needs and market changes.

Financial IT: What role will developers play in the adoption of APIs in the financial industry?

Sean Sarginson : In an API world, developers are our customers. Successfully engaging the developer community across the financial industry is how we will unlock and fast-track the adoption of APIs, unleash creativity and drive the creation of innovative solutions.

However, we need to develop the right environment and the right tools to enable the production of APIs that developers will want to work with, that they'll find easy to use. In other industries we've seen this model deliver new applications that

neither the business nor the end user had thought of before.

Financial IT: What is SWIFT's role here and why are you keen to engage with developers?

Sean Sarginson: SWIFT is working to standardise some of the ways in which APIs are developed. What we've seen in the past with new tech in the financial space, is that everyone goes off and develops their own closed-loop solutions in isolation. It's much harder for third parties to innovate when there are lots of different API configurations out there, all built to different specs. How do you ensure the various applications can talk to each other and still conform to the necessary security and identity frameworks?

Bringing standards to the API space means they can be used more broadly and picked up much more quickly, but it also unlocks the potential for developers to get really creative – as they can query multiple APIs and receive data in standardised formats that then plug into their own mash up applications, for example.

SWIFT's role is to support the financial community and developers as they work together to build APIs that augment and enhance financial services. We want to foster a rich, diverse ecosystem of developers to inform this innovation and to understand how we can best provide support. We see ourselves as the neutral convenor, bringing many different players together to innovate in ways that have a meaningful impact on the end user's experience.

Financial IT: What will the Sibos hackathon look like?

Sean Sarginson: The Developer Park will be situated in the Discover Zone at Sibos, where people like Tim Berners Lee have spoken in the past and where, this year, the astrophysicist Brian Cox will take to the stage.

Participants will include FinTechs, startups – early and growth stage – as well as big technology firms, banks, standards bodies, computer science students – you name it. Each team will be composed of a cross-industry mix of developers, so collaboration will be key.

Sibos is hosting the hackathon, and SWIFT will play a part in it. We're giving everyone access to our developer portal, but we'll just be one part of a multidisciplinary team working together to come up with some great new ideas.

Towards the end of each day, the coordinators and hackathon teams will give an update on the Innotribe stage to share their ideas and progress with the Sibos community. On Thursday, the last day, the audience will have the opportunity to vote for its favourite project.

Sibos is the global forum for the financial industry. It's not just for the big banks – we're expecting over 100 FinTechs for example. There's a lot to see and learn outside of the hackathon – from expert talks to new product demos. So, my advice is get stuck in, see as much as possible, but be sure to drop by the Discover Zone!

Sibos takes place at the London ExCel from 23 – 26 September 2019. Review the Sibos programme, register to attend and learn more about the Developer Park at sibos.com.

MAKING **SWIFT** gpi ACCESSIBLE TO ALL BANKS

Banks that are future-ready will gain a lot of valuable commercial intelligence.

Straight-Through-Processing (STP) has long been an objective for banks – large and small. This is because of the increase in customer satisfaction level that comes with enabling customers to transparently and efficiently monitor the movement of their cross border payments. SWIFT gpi has arrived to regulate and facilitate this process and is now becoming the global standard in cross-border payments [See SIDEBAR]

Wins for all?

SWIFT gpi means that cross-border payments can be done faster, can be tracked and cost less to execute for banks and their customers.

However, the desire to adopt this innovation has been marred by the high initial cost of subscribing to this SWIFT product; that cost is in addition to acquiring the suitable software that will enable banks to operate at the highest security and compliance standards required to compete globally.

On the flip side, there are multiple advantages in implementing SWIFT gpi – such as tapping into the details of the remittance, the monitoring of the transaction and currency indices and the control that banks can exercise to fend off digital threats. These factors support the need for adopting SWIFT gpi more urgently.

The win for banks today will come when those financial institutions can become future-ready and able to handle SWIFT gpi payments, without the need to spend hundreds of thousands of dollars to install major software that adds complexity to its core system.

Enter Corzap

Corzap is a software solution platform that was developed over several years after closely mapping the life of a cross border payment – from the second the request to transfer comes from a customer to the final notification when the payment is fully settled into the recipient's account. The entire chain of events that transpires is now being digitised in order to allow customers and banks to track the status of the payment at any instant.

"Our vision is to provide affordable and effective software solutions that enable our clients – banks and service bureaus – achieve straight-through-processing of payments through SWIFT and to become totally compliant with the requirements of SWIFT gpi" notes Amr Soliman, Corzap's CEO.

"Our solutions sit on top of the core bank system (or service bureau) and continually update all parties in the payments chain – the ordering bank, the beneficiary bank and the various correspondent banks – on the progress of a particular payment and even the sending and receiving parties."

Three solutions

Over the last year, we have consolidated our product offering to provide turn-key digital solutions. These solutions were designed after listening to our customers and understanding their requirements to grow their customer base.

The first solution is an advanced message-tracking system, which enables banks to identify where is the payment at any point in time.

SWIFT gpi will become the norm for cross-border payments over the next year or so. According to SWIFT, over 500 banks have already signed up, globally, with the result that SWIFT gpi payments are being made in about 150 currencies and through over 1,300 country corridors. By the end of 2019, every bank that has adopted SWIFT gpi will be able to trace every payment sent to any of the 11,000 banks in the global SWIFT network.

Corzap provides future-ready software solutions that enable banks and service bureaus achieve straight through processing and gpi compliance of their SWIFT transactions. It has been implemented with global banks and leading service bureaus.

www.corzap.com

Amr Soliman,
CEO, Corzap

The second solution is an operational one that was created to help banks reduce the manual error that happens when a cross border payment is done. By reducing manual error, a bank can now claim the rightful fees and correspondent charges automatically from the beneficiary and correspondent banks. Our customers were delighted with this module as they were now able to monitor and generate revenue on all non-compliant messages that hinder STP, and more importantly validate all fees and charges with all partner correspondents as per the agreements in place.

The last solution ensures compliance with the SWIFT gpi standards. By achieving compliance status, banks and service bureaus will be recognised as global operators adhering to the highest compliance standards of cross-border payments as defined by SWIFT. This puts any bank in the running with all the top financial players.

Sibos 2019: from Africa to the rest of the world

The fintech industry and the many software companies are racing to develop digital solutions for banks and financial institutions to help them achieve better operational efficiency and fiscal compliance. However, there is a growing number of smaller boutique software houses that are disrupting the status quo. These players have honed in on the segment of small and medium sized banks that would like to challenge the TOP100 in providing boutique and customised service to their clientele. Many of these smaller challenger banks are domiciled in emerging markets and are usually not big enough to invest in expensive software and systems and choose to operate through a service bureau which could provide them with advantages of scale through the wider client base that the service bureau enjoys. Africa is the home to a handful of service bureaus – each with several hundred bank clients. The service bureaus are fast embracing cost effective SWIFT gpi solutions that are offered by software houses like Corzap.

“Sibos 2019 as a global event for everything “SWIFT banking and tech” is a great opportunity to showcase what emerging software houses can offer, and showcasing African tech development will be a great opportunity to compete on a global stage and offer other emerging markets the opportunity to see what similar banks are implementing today at a fraction of the cost of the big software companies.” explains Amr.

The Face of Smart Softwares

Going beyond the set offering of softwares, there is an even greater opportunity that is being discussed in events like Sibos around a complete suite of business intelligence tools that help banks make more informed business decisions and better services to their clients based on fact. Given the large amount of data that resides in a SWIFT message, new softwares are being designed to provide a solid database back end that will use machine learning and AI to analyse the volume of transactions and report back insights that allow banks to grow their services to their clients in a customised manner. With the growth in implementation of SWIFT gpi and increasing the volume of transactions being done daily, banks will start receiving valuable insights on topics such as currency corridors, volume of transactions by currency, destination and transaction purpose. This opens up the opportunity to accurately plan forex reserves, seasonality of payments and fee volumes that corporates pay.

The future of straight-through processing is bright and SWIFT gpi in partnership with a smart Software house – like Corzap – is the new way forward for banks that want to compete in a global market.

Financial IT
Innovations in FinTech

THE SHIFT TO SWIFT ISO 20022 XML FORMATS

MAKING LIFE EASIER FOR THE BANKS

Interview with Dirk Vesper, Vice President Product Development, valantic.

Financial IT: Dirk, please briefly describe valantic.

Dirk Vesper: valantic Financial Services Automation is a business unit of the global valantic Group, a worldwide leading supplier of software solutions in areas such as Electronic Trading, Payment and Transactions. valantic supports leading banks and financial institutions with standardised or customised solutions in the field of digitalisation, open banking, automation and the simplification of business operations. In addition to the development of banking solutions, valantic is experienced in consulting and implementation for the financial services industry.

Financial IT: Please simply explain the change that is happening between now and November. It appears that SWIFT MT formats in messages are being replaced with ISO 20022 XML formats. Is that correct? What is the problem this change is trying to solve?

Dirk Vesper: In November 2019, additional ISO 20022 based workflows are being added to the existing ones for SEPA payments. The new workflows will cover investigations in relation to SEPA payments such as non-receipt claims or value date changes. They were not part of the SEPA rulebook before. In November 2021, more market infrastructure will migrate to ISO 20022: high-value payments and payments settled by correspondent banks (“SWIFT payments”) will also be processed using ISO 20022 instruments. SWIFT will support a transitional period to 2026, during which banks may continue to send traditional MT messages.

Financial IT: Please explain FinCASE for Investigations. Is it primarily software for resolving demands, complaints and errors in cross-border payments?

Dirk Vesper: FinCASE is a multi-purpose case management application which is optimised to process queries and investigations in relation to financial transactions. The majority of our clients use it primarily for the investigation of cross-border payments because cross-border payments have the highest rate of post-settlement queries. FinCASE is also used for investigations for other instruments such as SEPA payments. With the introduction of the above mentioned ISO 20022 SEPA investigations workflows, we expect an increasing usage of FinCASE in the SEPA area.

Financial IT: What is the Unique Selling Point of FinCASE for Investigations? Are there any or many competing products from other software companies?

Dirk Vesper: Banks often have investigation functionalities within their core banking systems, AML, embargo or fraud applications and/or nostro reconciliation applications. Whereas

Dirk Vesper,
Vice President Product Development, valantic

these are isolated and non-standard investigation applications, FinCASE allows banks to centrally manage all kinds of queries and investigations and get a complete view of any transactional incident happening. FinCASE supports a standard investigation process and allows a full end-to-end automation of the process with a complete link to customer channels. As client channels are directly connected to FinCASE, the bank is able to provide an optimal service to their customers. FinCASE supports all kinds of investigations and transactions such as SWIFT MT, ISO 20022 as well as domestic instruments.

Financial IT: Why does the movement from SWIFT MT to ISO 20022 XML formats matter, given that FinCASE for Investigations can handle the latter?

Dirk Vesper: The ISO 20022 instruments are designed for electronic processing while traditional SWIFT MT standards are coming from the age of manual processing. ISO 20022 based instruments cannot be handled manually anymore because the data structure is very rich and complex. Besides the complexity of the messages, the regulators define rulebooks a bank needs to follow. The rulebooks mandate specific workflows and the usage of ISO 20022 instruments. Customers using FinCASE do not need to care about this. The complexity of messages and workflows is hidden to users and managed by the application. FinCASE allows the highest possible degree of automation according to the rulebooks. Any annual updates to the rulebook are part of the product, which is something that takes a major load away from banks.

Financial IT: What is the SWIFT GPI initiative's implication on FinCASE for Investigations?

Dirk Vesper: The GPI functionality in FinCASE is mainly related to the Stop and Recall-Service: FinCASE supports the communication with trackers and automatically involves communication with SWIFT Tracker, provided that the bank receiving the message is a GPI member. FinCASE also takes care of the GPI rulebook, including special formatted messages.

Financial IT: What is the main story that you will be promoting at SIBOS?

Dirk Vesper: valantic has long provided real-time messaging applications in multiple business areas – and valantic is a long-term SWIFT partner. The innovations we see in payments since the last years are fully in line with our products and solutions strategy: valantic's products at SIBOS are RTPE (Real Time Payment Engine), a fully blown real-time payment hub and FinCASE. Having both applications in our portfolio, we can help banks in major areas of change and innovation such as instant payments, ISO 20022, GPI and PSD2.

Fiona McNeill,
Principal Product Marketing Manager
Financial Services, Red Hat

THEMES DRIVING DIGITAL TRANSFORMATION AND LEADERSHIP IN FINANCIAL SERVICES

Incumbent banks should know they have to modernize their organization to compete in a world where customers want better and more personalized digital experiences. Eager to realize the cost-savings and increased revenue that can result from micro-targeting products and services, they can adopt next-generation technologies to transform their businesses to lead their market.

Digital leaders are focused on end-to-end customer experiences. Processes, policies, and procedures defined for branch networks are being reimagined to support new digital customer engagement. By modernizing the back office and business processes, banks have an opportunity to streamline, codify, and thereby automate – which, in turn, can reduce friction caused by manual checks and inconsistent policies. This can enable more seamless customer experiences and speedier customer service, with transparency into servicing while reducing operational costs.

Artificial Intelligence (AI) is one of the leading digital technologies that's captured the attention of financial services firms. While a number of use cases have emerged, one at the top of the list is its ability to help detect financial crime.

With increasing stores of event data, banks are challenged to analyze it given the old ways of storing, then analyzing data. Modern technology can help discover and predict anomalies in data without storing it first. Ultimately the goal is to do real-time detection as triage to help minimize the number of false positives investigated.

According to Deloitte , it is the cognitive capabilities associated with machine learning and natural language processing that are expected to make fraud detection models more robust – stronger and more accurate. As described by the Cognitive Computing Consortium, by their very nature cognitive systems can be distinguished from other forms of AI in their ability to adapt and learn from iterative human interaction.

Ultimately, it is the results that matter, reduction in false positives of 95 percent to 50 percent, along with a reduction of 27 percent in manual effort have been cited in a case using modern machine learning techniques – helping discover the undefined unknowns in data. However, it remains to be seen how much better over time these systems will become if AI and cognitive systems come together, with experts who can label data and teach the algorithms iteratively, like that of machine learning techniques in which an algorithm seeks to maximize a value based on rewards received for being right.

We are seeing financial firms marry operational efficiency efforts with AI/machine learning/cognitive computing – creating an additional layer of automated insight that is designed to optimize bank service processing. Part of that optimization can also come from hybrid cloud adoption, in which AI and machine learning models are available to operational systems in the data center and/or in a public cloud.

Native cloud adoption can include the use of Linux containers containing the libraries, dependencies, and files teams need, and these containers can be spun up and down on-demand. Just imagine: analysts can define the rules that automatically execute business decisions, informed by insights from embedded algorithms. Those algorithms, in turn, are part of the pre-approved library defined by AI and domain experts. All of this could be from a self-service environment that doesn't require your technology organization to spend time provisioning the tools, the data, or the processing capacity.

Of course, bringing these kinds of capabilities into new products beyond operations is within the realm of open banking. More banks seem to be realizing the value of co-creating products and services to expand their market reach to help them achieve new value streams. Combining back office operational efficiency and embedded intelligence with data sharing via open banking APIs should further propel digital leadership in financial services.

These technologies hold much promise, and banks should understand they need to rethink their technology investments to include them. But knowing what they need to do and figuring out how to do it can be two different things. Banks will have to be sure to aim and hit the digital high points that best fit with their long-term business plans aligned to customer journeys at the core. Today's dynamic customer environment should only continue, with new entrants and new ways of providing banking services. Perhaps the most prudent strategy is to plan for change.

These technologies have one thing in common. A successful return on technology environments that are mutable to business needs often depend on a willingness by the firm (and its leaders) to accept the cultural, process, and policy metamorphosis necessary to make them – and the larger digital transformations they can facilitate – work. This is a culture change for a traditional long-standing industry.

It's going to be challenging to digitally transform banks, yet a path must be chosen and navigated, all while the banking landscape continues to change.

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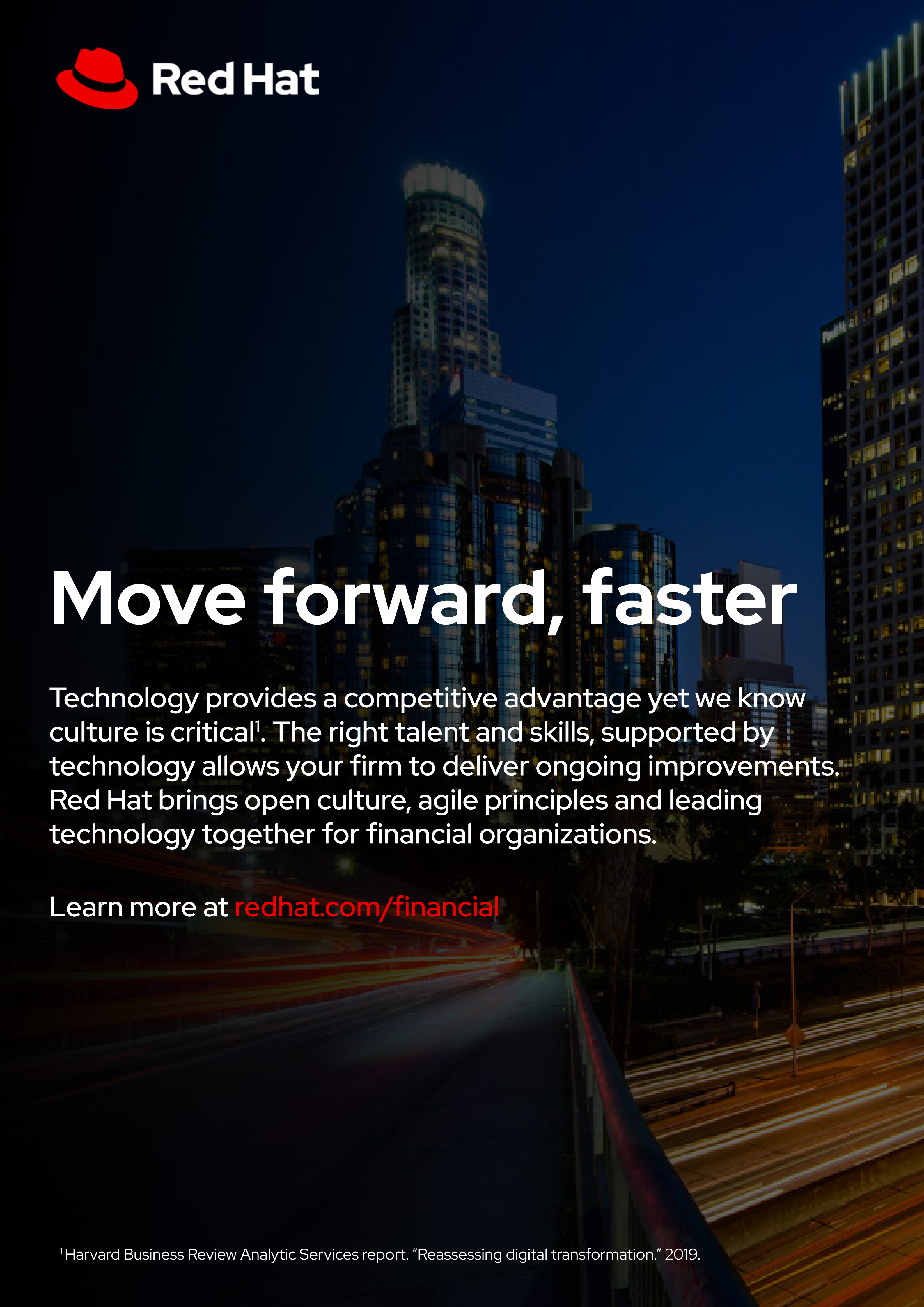
1 https://www2.deloitte.com/content/dam/Deloitte/us/Documents/audit/us-ai-risk-powers-performance.pdf



[1] Harvard Business Review Analytic Services report. "Reassessing digital transformation." 2019.

OPEN BANKING PSD2 REGULATION: WHO IS AFFECTED?

AND WHAT ARE THE CHALLENGES?

Across Europe, implementation of the Payment Services Directive 2 (PSD2) Open Banking came into force on 14 September 2019 and affects over 9,000 Financial Institutions (FIs).

Payment Service Users (PSUs), comprising consumers & SMEs, now have the legal right to share their transactional account data from their FI with regulated third-party providers (TPPs). The regulation applies to all transacting accounts that are accessible via an online interface such as E-money issuers, Payment Institutions, Credit Institutions, Building Societies and Banks.

In order to comply with the regulation, FIs must have put in place a modified user interface (screen scraping) or a dedicated interface (API) to ensure regulated TPPs can access transactional account data when consumer consent has been given.

PSD2 Open Banking is the single largest seismic shift of this generation within the banking and payments industry and whenever new regulation is imposed, complexity and confusion are inevitable.

Checking the legitimate status of a Third Party Provider

When a TPP requests access to a FI's API to either access end user account data or initiative a payment on behalf of the user, the FI needs to check if the TPP is a legitimate organisation and whether they are regulated/approved by their home member state National Competent Authority (NCA) – the organisations empowered by law to supervise regulated entities across the European Economic Area (EEA). If a TPP can be identified and has the requisite regulatory status, the FI is legally required to give them access, provided PSU consent has been given.

If the FI provides data to a TPP that is not approved/regulated to receive it, they are in breach of both PSD2 Open Banking and potentially GDPR.

For a FI to be able to identify a TPP and check its current regulated status there are over 100 databases that it needs to access, in real time, to answer this simple question:

Some challenges

- The European Banking Authority (EBA) register, the central EU database of payment institutions, electronic money institutions and agents is only updated with information every 24 hours.
- All 31 NCA databases report different information.
- There are over 70+ Qualified Trust Service Providers (QTSPs) who can issue eIDAS Certificates.
- There is no SLA on how quickly a member state NCA must inform other NCAs if it revokes a TPP.
- If a TPP is revoked, there is no obligation for an NCA to inform any of the QTSPs.
- There is no obligation on QTSPs to check if a TPP has had its regulated status revoked.
- There is no obligation for TPPs to register with PSD2 schema.

So, with all the different parties within the eco-system having no legal requirement to communicate with each other and all databases presenting differing information, there is a requirement for a real-time consolidated database containing the information needed by FIs to help them identity TPPs and their regulatory status and therefore minimise and mitigate risk.

TPP checking simplified

Konsentus offers FIs a low cost, easy deployable PSD2 schema compliant service, delivering all the functionality required by a FI to

Mike Woods,
CEO, Konsentus

Mike has enjoyed a leadership career spanning retail, banking and technology companies.
As an Executive Director at Natwest Bank and then the Royal Bank of Scotland, Mike headed up a group comprising over 1,000 colleagues and was responsible for e-commerce and payments across Corporate & Retail Banking and Investment Management.
Mike then founded Aconite, a payments technology software company. As CEO he built the business from scratch and with the support of Venture Capital expanded the company into a global organisation operating across the USA and EMEA.
Having exited the Aconite business, he joined the board of Proxama Plc where he developed their global Digital Payments business. In addition to these roles, Mike has also enjoyed a number of Non-Executive advisory positions.
As co-founder and CEO of Konsentus, a Regtech company focused on the PSD2 and Open Banking market, Mike is quickly developing the business into an industry leader having already expanded into multiple markets and attracted partnerships and investment from across Europe.

validate the identity of a TPP and its most up to date regulated status.

The three core components of the solution are:

- **eIDAS Certificate Checking** – Konsentus validates a TPP's eIDAS certificate(s) in real-time via the relevant QTSP. This gives the FI confidence that the TPP connecting to its open banking API is a PSD2 recognised service provider
- **TPP Regulatory Checking** – Konsentus holds a register of all regulated entities across the EEA. Every time a TPP attempts to access an FI's open banking API, Konsentus checks in real-time the regulated status of the TPP and the services it can provide. Konsentus constantly monitors all regulatory databases across the EEA, such that if there is a change in regulated status of any authorised FI, Konsentus can reflect this change within its database.
- **OAuth2.0 Tokenisation Issuance & Management Services** – For certain open banking services, PSD2 schema require FIs to issue OAuth2.0 access tokens to TPPs. Konsentus provides real-time issuance, checking & validation, and life-cycle management of Access Tokens issued on behalf of the FI.

All these components are supported by an immutable audit log, with data stored for seven years to handle any disputes.

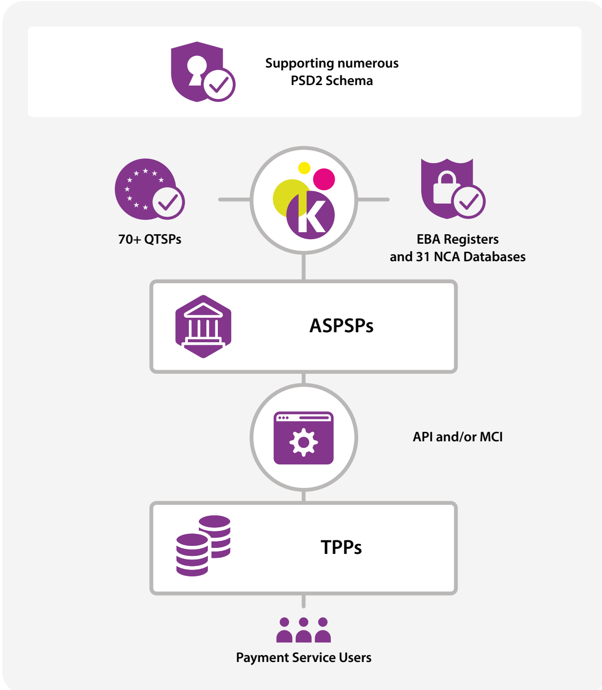
Mitigate risk, prevent fraud and meet regulatory requirements

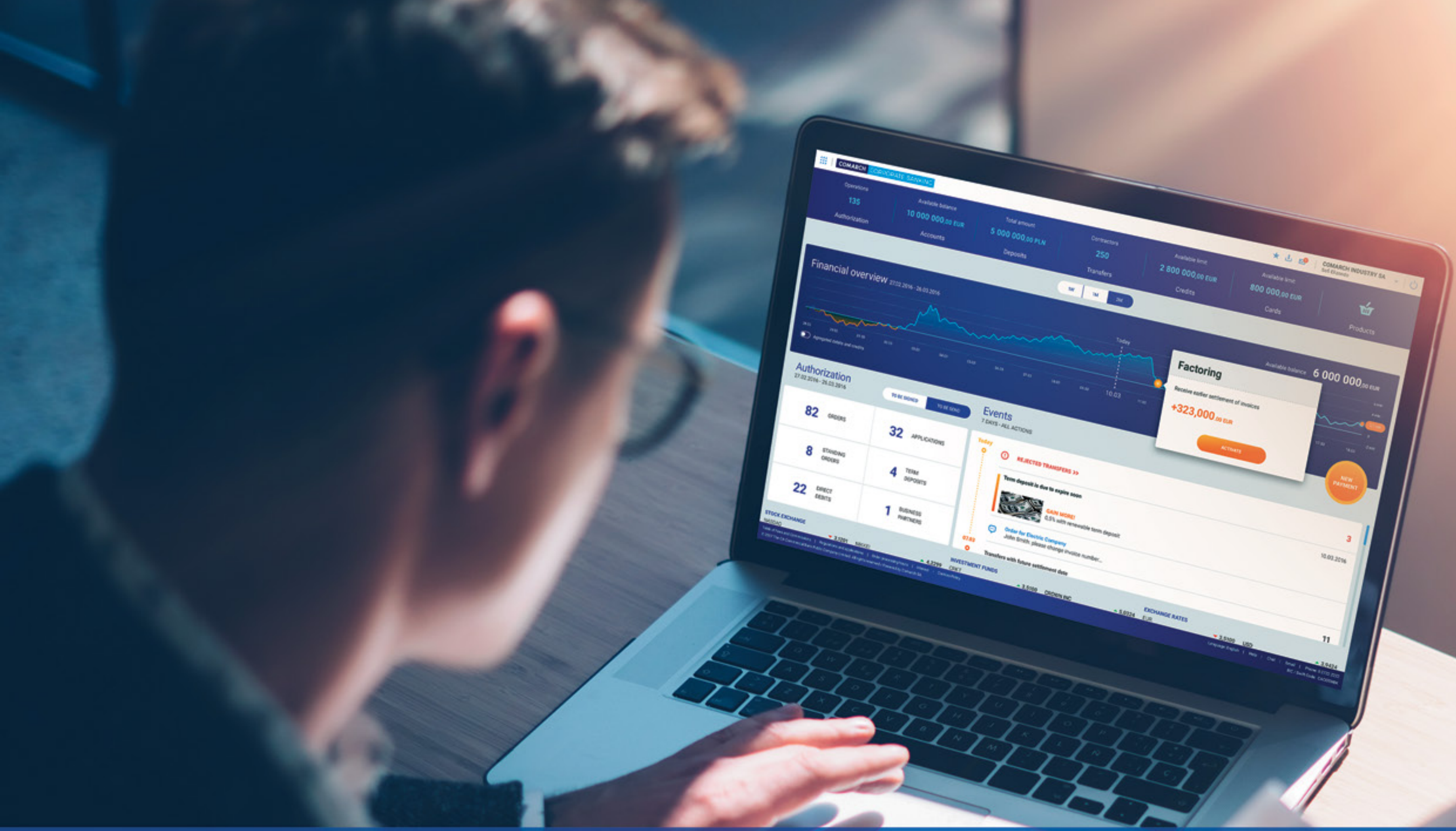
The Konsentus solution gives Financial Institutions the confidence they need to ensure they can comply with regulation whilst minimising and mitigating potential risk. RESTful APIs remove the need for clients to integrate with multiple databases and the dedicated SaaS solution can be quickly and easily deployed.

By checking the identity and regulatory status of a TPP in real-time, Konsentus ensures data is only ever provided to a TPP who has the regulatory status to request and receive such data. By supplying data to an unregulated TPP, a FI is at risk of PSU account data being compromised and fraudulent activity taking place.

In the complex ever evolving Open Banking ecosystem, the simple and easy to integrate Konsentus solution provides Financial Institutions with the information required to make informed risk management decisions protecting PSU data and ensuring compliance with European regulation.

How Konsentus fits into the PSD2 Open Banking ecosystem

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Financial IT
Innovations in FinTech

Gresham

THE RISKS OF OPEN BANKING FOR CORPORATE TREASURY

Do we really know what we don't know?

"There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know."

These are the immortal words of Donald. No, not that Donald, another Donald, sometime U.S. Secretary of Defence Rumsfeld, who said this back in 2002 on a subject fairly far removed from Corporate Treasury yet whose words are nevertheless highly applicable to the current 'Open Banking' revolution.

The benefits of Open Banking to corporate treasurers are well documented, but can appear beguilingly simple and carry hidden risks, or as that other Donald would say, "unknown unknowns".

At Gresham, a provider of cash management solutions for amongst others, corporates and banks, my colleagues and I live and breathe Open Banking and other forms of payments and liquidity automation. As such we aim to continually minimize the associated risks for clients by embedding safeguards within our software products and managed services. However, such risk mitigation only goes so far, and any corporate treasurer wishing to embark on a programme of Open Banking-based cash management needs to be aware of the risks to safely reap the rewards.

Questions of definition

Open Banking is an oft-used (and right now in 2019 often misused) term with no universally accepted concise definition. So before considering the associated risks and mitigating factors, it is worth describing how Open Banking came into being, what it really is and what it is not. The simplest definition I have seen states that…

"Open Banking is the secure way to give providers access to your financial information."

This definition initially applied to retail banking, as did the original EU second European Payments Service Directive (or 'PSD2', a follow on from SEPA), that obligated banks to give appropriately qualified providers (mainly FinTech payments providers, and with client permission of course), the ability to access account balances and initiate payments. Providers would access the banks' systems via real-time Application Programming Interfaces (or 'APIs – effectively automated mechanisms that enable computer systems to talk to each other), which were to be standard entry points that the provider's computer systems could use to automatically send and receive client's financial information. The provider then offered services to the client that might range from management of current accounts to on-line shopping. All in real-time, available via browser portals and mobile Apps at very low cost. The EU directive stipulates that APIs must be standard, banks must publish details of their APIs to providers and give access to technical documentation and test environments (so called 'sandboxes' – I'm still not really sure why they call them that). PSD2 came into mandatory force in January 2018 and the retail and SME space has its seen usage grow exponentially.

Institutional usage is a different story, and as has so often been the case with other banking innovations, institutional take-up of Open Banking lags well behind in terms of the safe and easy to use services the retail-banking sector takes for granted.

Phil Boland,
Managing Director – Cash Management Solutions,
Gresham Technologies

"Phil Boland, an Anglo/Luxembourg national well known and respected in cash management and financial messaging circles, heads up Gresham Technologies' Cash Management Solutions division. Phil has a long and successful track record involving both the design of innovative financial software products and the practical implementation of those products to deliver advantages to banks and their institutional clients. In a career spanning several decades, starting with UBS, then Clearstream Bank, before going on to co-found payments software specialist provider the B2 Group, Phil has been responsible for advising on, developing and delivering, mission critical software solutions that leverage the latest technologies to bring tangible benefits to household-name banks, insurers, asset managers and corporates. Most recently, Phil has turned his attention to Open Banking as it applies to payments automation for institutions around the world that utilise Gresham's award winning Clareti product suite and managed services."

Technology change risk

Two key reasons for this lag appear to be the risks perceived by banks and corporates around technology change, and partnering with the intermediary third-party providers (often FinTechs) that have proliferated on the back of Open Banking.

When considering the technology change risk, it is important to remember that institutional transaction banking runs for the most part on legacy systems (as recently as 2017, a Reuters study showed that 43% of banking systems use COBOL, a computer language devised in the 1950's). The old adage "If it ain't broke don't fix it" served the banks well in the past. Now, however, with the paradigm shift that is Open Banking, legacy systems aren't just "broke", they are unfit for purpose, operating in a payments landscape that evolved over the years to operate with balances calculated (at best) on a daily basis, and even longer clearing times, across legacy technology that has been built up slowly and carefully for safety rather than flexibility. Then there is the labyrinth of varied and complex systems interactions that must be navigated to provide end-to-end institutional transaction banking services. A corporate may run an ERP system for its accounts payable disbursements, a TMS for cash and treasury processing, a payroll system...the list goes on and on. The bank then runs its own core banking applications and operates payments channels that may each potentially use different technology (message formats, connectivity protocols etc). Many multi-national banks and corporates are also the result of expansion by acquisition, with a legacy of disparate systems around the world, meaning every geographical region and subsidiary operates differently. And then there is lack of standardization. Whilst PSD2 and other Open Banking initiatives purport to impose standards, the reality is different, with many banks offering subtly (or not so subtly!) different APIs, making seamless market-wide integration all the more difficult.

So, adapting the technology landscape involves numerous "unknown unknowns" that are unpalatable to the traditionally conservative corporate treasurers and their transaction banking provider counterparts, not least of which is the cost of change versus the benefits brought by Open Banking.

Intermediary risk

But aside from the technical challenge, we have the intermediary risk to consider, especially those intermediaries holding our funds on their balance sheets, the 'e-money' providers. In the retail world this arrangement works fine, but in the retail world we tend to only make low value e-money payments and often carry insurance against any related losses. And just like the time honoured method of giving our money over the counter to a newsagent for a newspaper in one hand whilst simultaneously taking the paper in the other, we instinctively accept that the e-money providers require us to put them in funds before a transaction is executed.

The institutional world is different, and corporate treasurers expect banks to provide sufficient liquidity for payments to be made regardless of cleared funds being available. Intermediary e-money providers generally cannot do this, needing client's 'relevant funds' (i.e. those funds to be used for the execution of a payment), to be on account before the payment can be executed.

Then there is the strength (or not) of the e-money provider's balance sheet itself. Since 2008 the institutional world has been acutely aware that mainstream banks are not invulnerable, and corporate treasurers regularly rate banks in terms of likely insolvency risk. However, with modern banking capital adequacy controls in place, a far more likely scenario for payment failure is that of a non-bank provider becoming insolvent whilst in receipt of client relevant funds, and this risk remains despite there being is plenty of regulation. For example, the FCA's EMR's ('Electronic Money Regulations') and PSR's ('Payment Service Regulations') both stipulate how relevant funds should be safeguarded, and the EU Directive 2015/2366/EU Regulation 98 covers PSD2 provider operational and security risks. However, the simple fact remains that non-bank providers may not have the balance sheet strength and/or the correct segregation of funds to guarantee that clients will not lose their money if those funds become unavailable due to some unforeseen event such as insolvency or cyber fraud. This perceived risk of some 'unknown unknown' provider event leading to a financial loss for an institution is always on the mind of a corporate treasurer when assessing the benefits of Open Banking, and a recent study of providers by the FCA ('Safeguarding arrangements for non-bank payment service providers' – July 2019) seemed to validate that perception, with many of the providers weak on both capital adequacy and understanding of the segregation required to safeguard relevant funds.

Nobody ever got fired for banking with...

When comparing the capital adequacy of UK Tier 1 banks with that of providers it is reassuring to hear that (according to the Bank of England's report of March 2019) the capital buffer of those banks has increased to 15% of risk-weighted assets since the crash of 2008, with market cap valued at four hundred billion GBP. In this context another old adage springs to mind "Nobody ever got fired for banking with BLANK (add in the name of your favourite Tier 1 bank – perhaps JP Morgan if you're American, Barclays if you're British, BNP Paribas if you're French, etc etc)", along with a key reason why banks exist in the first place, namely to make sure your payments get made and your money is safe no matter what.

Combine all this perceived risk and it is not hard to see why the institutional sector will take longer to comprehensively adopt Open Banking than its retail cousin did. But the benefits are clear, and if current trends continue, we will surely see an institutional payments landscape largely driven by Open Banking principles before too long. And there is already light at the end of the tunnel, with many banks investing heavily to offer true real-time balances and payment initiation, whilst collectively standardising their APIs (e.g. the 'CMA9' group of banks and building societies in the UK). There is also continued growth in the use of real or near real-time payments schemes, such as Faster Payments.

In this near-future landscape the FinTechs, rather than acting as 'neo-banks' taking balance sheet risk, will more commonly be aggregators for corporate to bank communication, managing the complex technical and cyber security risks on behalf of their clients, and providing those clients with the Apps and other tools to manage their cash whilst operating with all of their banks seamlessly, anywhere, at any time, in real-time – managing the Open Banking 'unknown unknowns'.

ING COOPERATES WITH FINTECHS TO CREATE A DIFFERENTIATING CUSTOMER EXPERIENCE

Banks are operating in a rapidly developing environment, where consumer behaviour and technological standards are changing continuously. No wonder innovation is a key element of ING's strategy, with the Netherlands-based multinational bank competing with big techs and teaming up with fintechs to create a differentiating experience for their customers.

Banking products have become commodities. That's why banks need to find other ways to be successful in the future, beyond the products they offer. Consumers expect an experience that is personal, instant, relevant and seamless – an experience that's set by the tech companies: the 'big techs', the 'small techs', the 'fintechs'. The only way banks will be able to stand out is by offering a superior customer experience, which can happen if banks are connected to the platforms where their customers are.

We are in the middle of a classic transformation – an era of rapid and big changes in the financial services industry. This offers great opportunities, but it also means a radical shake-up for both newcomers and veterans on the playing field. To succeed, banks must be willing to revisit their strategies on a regular basis, take risks, and eliminate silos. And above all, they must be open. Open to actively involving others from outside their business. Open to invest in others, and get others invested in what they are doing. That's why, I think Europe's revised Payment Services Directive (PSD2) is a great development, despite the operational and security risks it brings to the table. It opens up possibilities for third party providers and creates new ways for banks to do business.

Partnerships – the name of the game

ING works together with both external and internal partners. We currently have 166 fintech partners in nine countries. We believe that collaborating with fintechs is key because we can't work on our own anymore. It's a win-win: fintechs can bring agility, creativity and entrepreneurship, while financial institutions like ING bring a strong brand, a large client base with an international footprint, and breadth of industry expertise. We are pragmatic in partnering and open to various types of collaboration, for example, nurturing our own fintechs, taking equity stakes as well as straight supplier/customer partnerships."

The Dutch lender partnered with international payments company TransferMate to give its SME and corporate clients a faster, cheaper and easier payments solution. ING also acquired a 75% stake in Payvision, a fast-growing international payments services provider.

Cobase is an example of an internal partner. The fintech start-up that gives corporates a single point of access to bank accounts and other financial services, was developed in ING's accelerator programme with clients from multiple industries. Yolt is another example of ING's internal innovations. The app lets consumers in Britain, Italy and France actively manage their personal finances with a one-stop overview of their accounts.

ING wants to be go-to-place for all the financial needs of our customers: a platform where people and businesses can control all their finances and more. That's why we are opening up to third parties. Our promise is to make banking clear and easy, available anytime, anywhere. Where we can, we innovate, and for the rest, we are constantly on the lookout for external partnerships with companies that offer a distinctive customer experience."

Competition or collaboration?

We recently did a large survey asking corporates about fintechs. One of the outcomes was that companies are more inclined to work with fintechs that are endorsed by a powerful brand, preferably a bank. The reason is: banks are heavily regulated and having a banking licence creates trust and stability.

While fintechs have the latest technology and the flexibility to take fast decisions, banks have significant trust and relationships. For a partnership to work, banks need to learn to be open and agile, and fintechs need to have a proven business model and a solid understanding of the banking industry.

In a nutshell, fintechs and banks complement each other. We need them and they need us.

However, when considering a collaboration, there are certain things that must be in place: we look at the potential partner's cloud provider, evaluate the way the company is organised and check whether their services are compliant with our needs as a bank.

For a successful partnership, both sides must be transparent at all times and stay focused on their original goal: to complement each other in creating more efficient products and services, while keeping the customer at the centre of all decisions. It is all about creating a differentiating customer experience.

"Where we can, we innovate, and for the rest, we are constantly on the lookout for external partnerships with companies that offer a distinctive customer experience."

Mark Buitenhek,
Global Head of Transaction Services at ING

Mark Buitenhek is a seasoned banker. He is Head of ING Transaction Services, with overall responsibility for payments, cash management, trade finance, working capital solutions and commercial cards for Wholesale Banking. His knowledge of banking combined with his endless energy and swift 'out of the box' thinking, makes him a reliable partner for traditional way of banking and a sparring partner for innovative accelerator projects and start-ups.

Mark is a recognised international keynote speaker, specialising in banking industry disruption, industry (Fintech) innovation, predictive analytics and artificial intelligence. He also addresses how digital banking can meet customer needs and expectations. Mark is a member of the SWIFT board of directors, a member of the MasterCard Board, Chairman of the Supervisory Board at Payconiq and Chairman of the Supervisory Board at Payvision.

Financial IT
Innovations in FinTech

BANKING WHICH IS INTELLIGENT, SUSTAINABLE AND DIGITAL

There has always been a close link between banking and technology. When compared with many other industries, banking has always been peculiarly reliant on storing and processing information. Banking has been intrinsically tied to the capabilities of the technology used to underpin the required business capabilities. Banking has always taken advantage of new technologies as they arise, and conversely, changes in the sector are driven by the introduction of new technologies which enable different ways of doing business.

The idea of Digital Banking is hardly new, with many of the initiatives which are being pursued by banks falling within this topic. In broad terms, digital banking refers to the ability of a bank to acquire and serve customers over all channels, electronic and human, and to be able to manufacture and process new products and offerings quickly and efficiently. The details of how banks have interpreted this mission has varied over time. It is also partly dependent on the type of customer the bank serves and the geography in which it operates. What has become clear though, is that for most banks becoming digital is not an end destination, but is instead part of a journey.

Many of the early attempts to define digital banking were based around digital channels and have become superseded by broader and more holistic programs of customer engagement - and agile and personalised product manufacturing. This is where the concept of intelligent technology is now becoming more critical. Artificial Intelligence (AI) is a prevalent topic in the technology sector at the moment, and this is particularly true of the banking industry. Within this, there are areas of earlier adoption, such as:

- Operational Efficiency
- Customer Engagement
- Personalisation
- Credit Decisioning
- Fraud Detection
- Robo-Advisor capabilities in the Wealth Management sector

Early attempts at AI introduction were focussed on increasing the level of automation, and hence operational efficiency, in largely back-office processing areas. AI is the same technology which is used to solve problems and queries in a helpdesk context. It is redeployed to reduce the number of human interventions needed to process exceptions in a Straight Through Processing (STP) environment. Examples would include attempting to repair transactions in a payment queue where some information is missing or truncated.

As AI decisions become more complex and widespread there has been more discussion about how to audit, or explain, how the results have been arrived at. This is particularly true for decisions that have a direct impact on customers. As an example, the use of AI in making credit decisions can have a direct impact not only on customer satisfaction if credit is declined, but also on the bank's ability to offer an alternative product to the customer since, without knowing why the credit was declined, it will be unable to

Nicholas Brewer,
Product Marketing Director, Temenos

Nicholas Brewer is the Product Marketing Director for Temenos, and is focussed on understanding how banks can use the new technology innovations which Temenos bring to market. He has spent over 25 years in the banking technology industry, concentrating mainly on the future direction of banking and technology and in helping banks to see how they can gain competitive advantage by adopting new technology and solutions.

automatically propose a suitable product for which the customer will be guaranteed to be eligible. Scenarios such as this are leading to an increased focus on Explainable Artificial Intelligence (AIX). This sets out to accomplish very much what its name suggests – automatically made decisions which can be explained in human-comprehensible terms. This becomes important not only for customer-related interactions, such as the one given in the above example but also for decisions and ratings which have a regulatory impact.

The introduction of intelligent technology is fast-moving, with banks seeking competitive advantage from implementing it quickly in areas where it can be most effective. However, one of the lessons from the earlier stages of the digital banking is that, although immediate advantage can be gained from the swift introduction of new technologies, banks are engaged in an industry where battles are often won and lost over more extended periods. Although it is vital to embrace innovation, it is also necessary to ensure that it is used in a way which is sustainable in technology and business terms.

What, then, makes new technology sustainable for a business? The main criteria is that the technology can continue to be improved and upgraded without requiring wholesale replacement or re-implementation every few years. What is innovatory today, can rapidly become out of date, and the pace of innovation continues to quicken. Many of the newer approaches to technology, such as containerisation and micro-services can help with this, particularly when allied to modern DevOps processes. In this case, the use of new technology and modern technology management processes mean that even complex systems can continue to be upgraded frequently without there being a large and negative impact on ongoing business usage. It is important not just to adopt new functional capabilities, but also to embrace the new ways in which technology is developed, tested, deployed and upgraded continuously. This is an approach banks need to implement internally, but also with their strategic technology suppliers and partners.

In parallel, to ensure that the technology is sustainable, it is also crucial that banks can make the best use of the new technology capabilities which they acquire. It is important not to see staff training and skill growth as a one-off event when new technology is introduced, but to develop practical training and support programs, often using self-study and technology-enabled approaches. As with the underlying banking technology, it is also vital that the content is maintained and updated as the bank's policies, strategies and technical capabilities continue to develop.

Digital Banking is, then, a long term journey upon which almost all bank are engaged. In seeking to stay ahead of the competition, it is important to see how new technology can be leveraged, as is happening rapidly with AI and AIX at the moment. However, longer-term success must also be built on the foundation of maintained and upgradeable technology as well as ongoing training and education programs within the bank.

DIGITAL ADOPTION: DO OR DIE...

Interview with Janice Diner, CEO and Founder of Horizn

Financial IT: Can you tell us a little about Horizn?

Janice Diner: Horizn helps financial institutions get ready for the digital customer in an environment where digital transformation and the rapid launch of innovation are the norms. The award-winning SaaS platform focuses on equipping both frontline employees and customers directly with the knowledge needed to improve the customer experience and dramatically increasing digital adoption across all channels.

Horizn's proprietary technology combines a simulator microlearning methodology with gamified principles and advanced analytics. Horizn helps banks distribute product knowledge to employees, digital ambassadors, with customers in-branch (hip-to-hip), in call centres, directly to customers online (through websites), and in marketing activities.

Financial IT: Can you define digital adoption in banking?

Janice Diner: As financial institutions become increasingly more digital and are pushing innovation, the race to increase digital adoption and improve the customer experience has revved-up. While speed to market remains critical, achieving digital and mobile adoption with customers is setting the leading financial institutions apart. Although simple in theory, most banks are not yet aligned to manage the volume, cadence or depth of knowledge required to support its digital transformation. 'Build it, and they will come' has proven to be a myth across digital capabilities.

Our experience also suggests that senior level commitment is essential, as it signals to the organization that becoming a digital bank is not a side-of-the-desk or middle management activity.

Digital adoption in banking means achieving a state in which both your employees and your customers gain the ability to use digital assets and tools as they are meant to be used and to their fullest extent. When your employees and customers increase digital fluency, they not only learn and use the basic functions of your digital assets, but maximize the use of multiple digital tools and product features.

Financial IT: Is your frontline digitally-savvy and ready to answer your customers' mobile and digital banking questions?

Janice Diner: Underpinning digital transformation is organizational readiness. This refers equally to employee readiness, customer readiness, and technology readiness. These three have to move together. If digital innovation is not being surfaced to your employees or if they aren't properly trained or positioned to be confident then they will not be comfortable discussing digital innovation with customers.

There are no shortcuts to this. In order to ensure that your frontline (in-branch and contact centres) colleagues are digitally-savvy and ready to talk digital with your customers, they need digital knowledge. Ideally, this knowledge is accessible to employees before your innovation goes to market and available with every new feature and update you are launching.

With the Horizn Employee Platform, you can empower your entire workforce with the knowledge needed to be confident, ready to talk and demo digital features with your customers across all channels. Our In-Branch Digital Demo module is being used to enable hip-to-hip digital demos in-branch with employees and customers on mobile devices, tablets and kiosks.

Financial IT: How do you make your customers aware and help them understand your digital products to help drive digital adoption ?

Janice Diner: Given the rapid pace of innovation, it is critical that transformation puts the customer at the centre of everything. We hear from our global bank clients regularly with similar mission statements such as, "We need to offer a world-class legendary customer experience", "Our mission is to power human potential" or "We wish to embed ourselves in the community and be a relationship bank for their customers".

Banks globally talk about the importance of the customer experience, the omni-channel experience. But when your customers are on your website, can they find information on "how to" use your latest digital technology, are your customers aware of the new features you have just launched in your mobile app, and how are you leveraging your marketing activity to communicate this knowledge to them?

At Horizn we had this early "aha" moment, where we realized we were

Janice Diner,
CEO and Founder of Horizn

Janice Diner is the CEO and Founder of Horizn, an award winning Fintech company that helps financial institutions dramatically accelerate digital adoption. Under Janice's leadership Horizn has won, the Celent Model Bank Award with Royal Bank of Canada, the London Institute of Banking & Finance Financial Innovation Award with Nationwide Building Society and Best of Show at American Banker Digital Banking.

As product evangelist, Janice travels widely, she is a frequent speaker, getting on stage with her clients at the world's most prestigious financial industry events. Janice has been featured in Forbes, Financial Post and Entrepreneur.

Janice is passionate about being a role model for women in technology and is a mentor to the next generation of industry business leaders. She spent her early career in the advertising world blending senior creative leadership with business technology. Janice served as an advisor at the MaRS Discovery District helping early-stage tech companies commercialize, she has served as a board director for SheEO, and has served as a judge for the Cannes Lions Advertising Awards.

teaching humans how to use new innovation. All humans, employees and customers both need to learn and understand the digital products that are being launched in the market. This insight led to the Horizn Customer Direct Platform which distributes product knowledge, enables customers to self-learn new digital banking capabilities as they're released, encouraging faster and more efficient digital adoption. It is mission critical to the customer experience that your customers have the ability to access 24/7 "how-to" learning capabilities.

Financial IT: Tell us a bit about Horizn's platform methodology?

Janice Diner: Horizn's platform methodology combines product simulators, micro-learning, gamification and robust analytics to accelerate digital adoption of your latest innovation, with both customers and employees.

There is an age old Chinese proverb, "I hear and I forget, I see and remember, I do and I understand." Horizn's Product Simulator Methodology is a technology that acts on the lines of this proverb. We help all users, both employees and customers learn digital by experience in real-time in a safe environment that makes digital innovation easier to understand and comfortable to use.

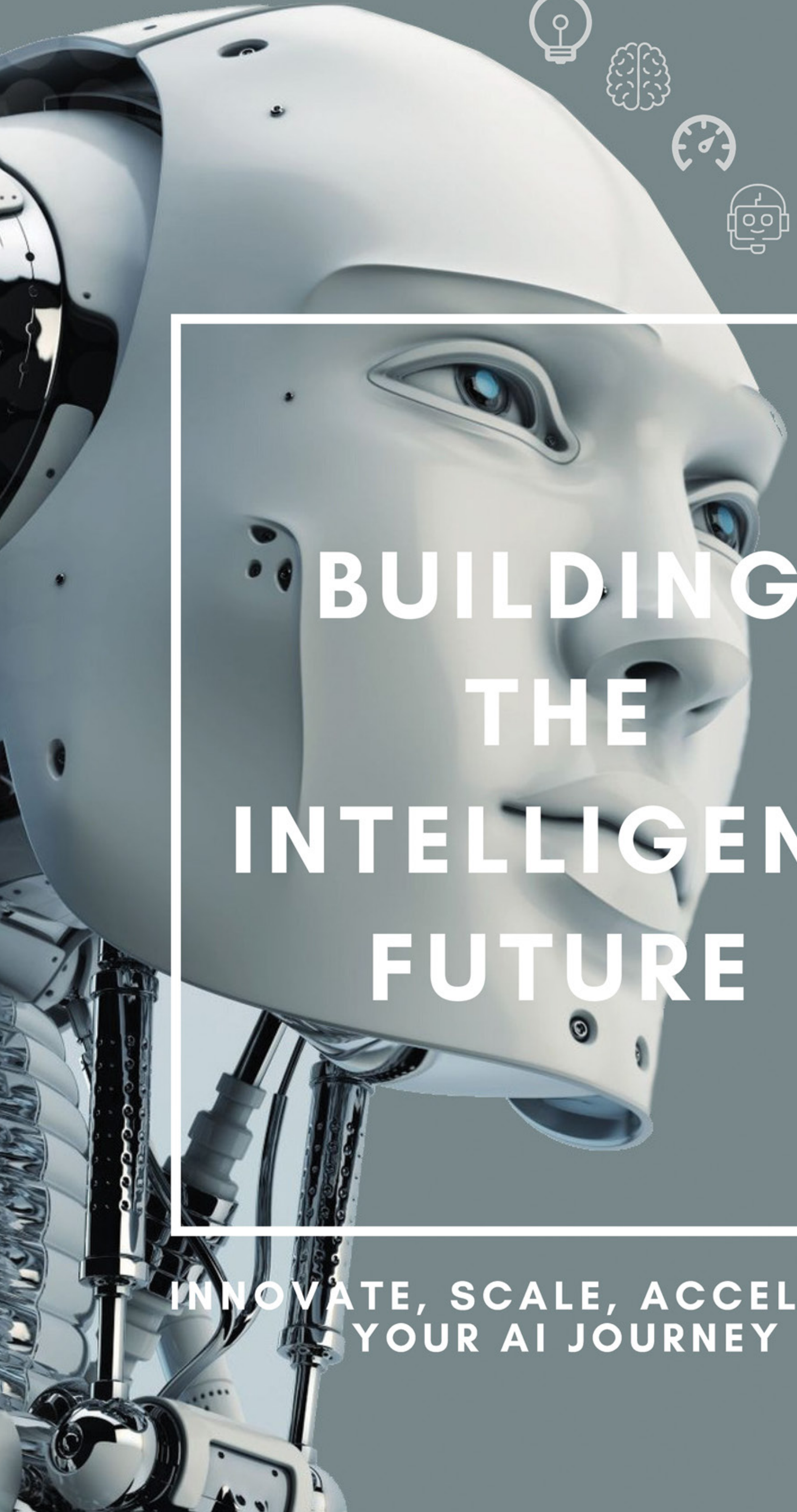
The platform also leverages micro-learning – which is the process of learning through short, digestible content. Complex mobile and digital features are broken down into small, digestible units specific to product features and desired learning behavior. They're easy to learn and they're easy to share with customers.

Our Product Simulators are integrated everywhere so that customers have direct access to learning anywhere, in-branch, with call centres, on bank websites, in mobile apps, and chatbots. Marketing teams are using Product Simulators in SEO, marketing campaigns and in email campaigns direct to customers.

Financial IT: What does success look like for your bank clients?

Janice Diner: At Horizn, our measure of success is client success. Using the Horizn Platform, banks globally increased mobile adoption by 25% and brought call center times down 45 seconds. Banks using our in-branch demo module with non-digital customers, have converted 20% of non-digital customers to mobile banking. With the Horizn Platform, our clients are winning awards like the Celent Model Bank Award with RBC's digital activation strategy and a Financial Innovation Award for Nationwide Building Society from the London Institute of Banking & Finance.

Powering Islamic Financial Markets



BUILDING THE INTELLIGENT FUTURE

INNOVATE, SCALE, ACCELERATE YOUR AI JOURNEY

FINTECH AND SHARIA-COMPLIANT FINANCIAL INSTITUTIONS

SUCCESSFUL ADOPTION OF DIGITALIZATION WILL SEPARATE THE WINNERS FROM THE LOSERS

Interview with Esam Alkheshnam, CEO, International Turnkey Systems (ITS) Group

Financial IT: Esam, please tell us about ITS

Esam Alkheshnam: ITS is known as the leading provider of advanced technology solutions and products that are designed specifically for Sharia-compliant banks and financial institutions. Obviously, we are investing in new and innovative products. We are also expanding in terms of geography - particularly in the Middle East, North and Central Africa region and the Caribbean. In addition, ITS is currently offering its products and services in the western region of Morocco and the Russian Commonwealth (CIS).

Financial IT: Can you share a little about your main products?

Esam Alkheshnam: First, I'd observe that we think that our competitive edge comes from our ability to adapt to the rapidly changing needs of the industry. That's what is implied by the second and third words in our name - Turnkey Solutions. A financial institution can adopt our turnkey solutions and be confident that they can leave worrying about the changes to us. Our award-winning ETHIX solution includes a core banking system, a trade finance system, and profit calculation engines. Among much else, it enables our clients to create Digital Branches and to receive advanced reporting in relation to their operations.

Financial IT: What are the main trends pertaining to digitalisation of Sharia-compliant banks?

Esam Alkheshnam:The important thing to remember is that Sharia-compliant institutions are as exposed to disruptive change that is led by digitalisation as much as conventional institutions. Whether the change involves mobile payments, InsureTech, crowdfunding or peer-to-peer (P2P) lending, or a move towards use of robots in bank branches, there are major implications for Sharia-compliant banks and Takaful operators. Those institutions that can use digitalisation to provide high quality products through multiple distribution channels and guarantee a positive customer experience should thrive. Those that cannot risk becoming obsolete.

Financial IT: People have been talking about the implications of digitalisation for years. Why do you think that these trends have further to run?

Esam Alkheshnam:In a word, demographics. Something like half of the world's population are Millennials who are 30 years of age or younger. Many of them are living in countries where, by most metrics, the financial services industry is growing rapidly from a low base. None of them have long experience of pre-digital financial services. They take for granted the customer experience that is only available from a flexible and fully digitalised institution. They are becoming more numerous and wealthier. Some of them are already millionaires.

Financial IT: Do you have any other comments that you would like to make?

Esam Alkheshnam:Digitalisation and FinTech are enablers of Sharia-compliant financial services. They should make it possible for Sharia-compliant banks and Takaful operators to expand more rapidly than would otherwise be the case. As I explained in my discussion of demographics, the drumbeat of change will continue - and the tempo will likely increase.

International Turnkey Systems Group K.S.C.C – (ITS) is a leading integrated information technology solutions and services provider that offers world class solutions that transform organizations and support business success.
Established in 1981, ITS is Headquartered in the State of Kuwait with R&D centers in Kuwait & Cairo, and seven offices and numerous partners worldwide. With a 1,100 plus strong team of diverse professionals, ITS serves hundreds of top tier clients locally, regionally and across the globe through its Global Delivery Center (GDC) where it develops, designs and delivers cutting edge, customized software and service solutions.

Mr. Esam AlKheshnam,
CEO, ITS.

Mr. Alkheshnam is a distinguished industry veteran with a career that spans more than 25 years in the fields of information technology and software solutions. Prior to his appointment in February 2017 as the Chief Executive Officer of International Turnkey Systems Group (ITS), Alkheshnam held numerous senior positions in the field. The most recent being head of the IT Strategic Planning Department at the Central Bank of Kuwait, where he worked closely with the nation's banks and financial institutions to elevate performance standards. During his career, Alkheshnam has been credited with several notable achievements, including the innovation and management of several advanced IT solutions for numerous renowned regional and international companies.

As CEO of ITS, Alkheshnam is defining a new vision for the Group as he further underscores the Company's position as a leading provider of quality IT solutions and services for the local, regional and international banking industry. Alkheshnam holds a Bachelor's degree in Computer Engineering from the US, and a credential in Strategic Management from Harvard Business School.

Wael Malkawi,
Executive Director for Business Development at ICSFS

DIGITAL BANKING: THE KEY TO WORKING WITH DISRUPTION

Banks have been chasing digital transformation ever since the creation of fintech, when tech giants started imposing changes and creating new platforms for doing business. Today, banks are obliged to embrace digital technologies and fully leverage these changes in order to facilitate the demands of customers and proactively roll out new products. This enables them to both nurture and strengthen a customer-centric approach. As such, digital banking has become the key pillar of any bank's strategic evolution in today's highly competitive environment.

ICSFS believes that in order to be truly digital, a bank must re-engineer the way it does business by creating a new strategy of digitalization in its business model. Essentially, banks must face the growing competition from fintech start-ups, multinational organisations and tech giants through continued disruptive innovation.

The key to any successful transformation is choosing the right partner with whom to drive innovation, generate new opportunities and create market advantages over competitors in the field. This is where our innovation lies in flexibility, simplicity and efficiency. With decades of experience, ICSFS is recognised for its success in all of its operational regions, as it has a great understanding of international trends, as well as local requirements, regulations and culture. By implementing the ICS BANKS Digital Banking software platform, banks and financial institutions can generate new opportunities at a lower cost in order to enhance their market advantage. They can also exploit the software's key benefits to help create a better customer experience and journey.

Thanks to our secured and agile open banking integration, rich functionalities are accompanied by cutting-edge technologies and fully integrated digital banking touchpoints. This means that banks can offer their customers a truly virtual digital journey which, in turn, drives financial inclusion.

Our digital banking platform is embedded in the DNA of our universal banking applications (ICS BANKS and ICS BANKS ISLAMIC). Therefore, agility is seamlessly reflected in all the universal banking applications' products across all touchpoints, without the need for complexity or interfaces.

Omni-channel

Our software suite's proven omn-channel capabilities provide a full cycle of banking functions that are executed digitally – from customer onboarding and Know Your Customer processes to product execution and customer relationship management. It also offers flexible credit scoring, with a strong rules-based engine and back-office processes that are powered by an embedded BMP engine. The ICSFS digital platform is recognised for its advanced technological deployments, such as blockchain, smart contracts, open application programming interfaces and artificial intelligence, which all provide a real boost to customer experience. Many digital banking software providers offer a multichannel banking experience, instead of an omnichannel one. The difference is that when a bank uses a multichannel process, its touchpoints will not be seamlessly connected – this means its customers will not enjoy consistency and real-time access between any channel, anytime, anywhere.

ICS BANKS Digital Banking is available on cloud platforms, thereby providing a one-stop shop for customers seeking trusted business applications and service providers. Banks using ICS BANKS Digital Banking on the cloud can leverage global automation of communications and transactions with greater flexibility, agility and security.

Future-proofed platform

ICSFS continually reinvests in its software suites by implementing the latest technology to launch new products, create agile integration and keep pace with new standards and regulations worldwide. The ICS BANKS Digital Banking software suite future-proofs banks by offering a broad range of features and capabilities, which then provides greater agility and flexibility to enrich the customer's experience. What's more, personal customer analytics are provided through embedded analytics for activity-based reporting and customer performance, which thereby improves the trust and confidentiality between the customer and their bank.

The suite also encompasses an ecosystem of third-party services, because banks that want to survive and stay ahead of their competitors in this age of digital disruption must be prepared to collaborate with fintech firms. Fortunately, the suite controls how fintech digital business applications and services are delivered to banks' customers, allowing them to maintain a competitive edge and improve customer satisfaction with minimal cost and time needed for integration.

Eliminate market share loss

Banks should accelerate now to protect and expand their market share in the era of digital disruption. The speed of transaction is aligned with the speed of innovation, and banks must not turn a blind eye – they must embrace this revolution by first realising that innovation is not something they can do alone, and instead obtain the help of software providers that are up to speed with ongoing digital changes.

The whole world is interconnected. Today, governments are promoting financial inclusion and seeking to create a centralised database for citizens, including payments, transfers, personal data and more. Banks can benefit immensely from this amount of trusted data, as well as from other data sources, like social media, big data and apps. In turn, this information can be used to improve machine learning to create better results when using digital banking. This will result in the creation of more revenue sources. The data can also be used to make operations more efficient and increase market share for financial institutions.

Taking a step forward is fundamental for those who want to be part of the digital banking revolution – taking services off-the-shelf is the only logical step for evolving in the new market. Opportunities in emerging markets are opening up; being Cloud-available enables the global automation of transaction and delivery channels and communications. Therefore, choosing the right partner to guide this transformation is a top priority for those looking to succeed. ICSFS is setting the pace for what the new era of banking should look like. Professionalism, experience and market understanding make this company a key player in the regional banking software solutions market. It is now set to keep revolutionising the way banking is done, because this revolution is just the beginning.

Digital transformation: the key principles

ICSFS emphasises three main principles a bank must adopt: first, applying the latest technologies and making them available to customers. Second, enabling consumer firms to maximise their performance by increasing mobility, cost efficiency, efficacy and flexibility, and by filling the gap between strategy and execution. Finally, banks must provide innovation and tailored solutions for specific clients and countries.

MAKING LIFE EASIER FOR BANKS

What does a leading SWIFT Service Bureau do?

Founded in 1994, AEG stands today among the top SWIFT Service Bureaus worldwide and IT solution providers for the financial sector. The AEG Service Bureau is accredited and fully compliant with operational requirements of the "Standard Operation Practice" level as defined in the "SWIFT Shared Infrastructure Program".

To meet the growing needs of the market, we take on the duty to recreate IT and business solutions through our sophisticated and state-of-the-art products and services that we deliver to a clientele whom we guide to optimally manage their businesses through our offerings.

Diverse professionals and complete range of solutions

Bringing together certified professionals from numerous disciplines, ranging from support engineers, consultants and system analysts to trainers, designers and project managers, AEG ensures that all areas of expertise needed are accounted for.

AEG provides a complete range of solutions and services that complement SWIFT offerings to cover major industry-business needs: connectivity and hosting, payment and reconciliation, filtering and compliance, integration and secure file transfer, business continuity and disaster recovery, information security and CSCF compliance, among many other cutting-edge products and solutions.

AEG plays a massive role in serving the financial community in its region. Assisting the banking sector for the past 16 years, we believe that the concept of a service bureau, contributing a comprehensive range of offerings and supporting banks with our expertise and cumulative knowledge, is indispensable to our clients. This is because their needs are growing and the industry standards are advancing, especially those related to information security. We take the load off of our clients' shoulders and cut down their costs in a manner that allows them to focus on thriving their business and expanding their prospects. In fact, this very purpose that we serve returns with benefit on the financial industry as a whole.

Proactive approach to information security

We always take the initiative to provide our customers with the best solutions to answer their concerns and address the challenges they are met with. This proactive approach has always been the main driver and guide by which we conduct business. Furthermore, this strategy implies that we ally with specialists and business partners to exchange knowledge and expertise in order to widen the capabilities for both sides. Our partnerships naturally reflect their advantages on our customers, since they are to be served the latest technologies and the best technical support.

During the last few years, information security has surfaced as the world's priority – and one which requires special attention. Working closely with our clients and understanding their needs, we are able to create tailored solution packages to address the new requirements, especially those related to SWIFT CSP and CSCF. We are continuously working on new security products and solutions that further strengthen our clients' infrastructure and minimize risks. AEG is offering a complete range of security products and services to cover all risk aspects. In terms of our service offerings, we provide security consultancy, guidance and support, risk assessment and penetration testing.

Risk assessment is a technical consultancy service by which a simulated cyber-attack is performed on an IT Infrastructure to evaluate the implemented security controls and identify misconfiguration, weaknesses and strengths, while penetration testing is targeted to test various attack scenarios via table-top exercise using either ISO 27005 or NIST Risk Assessment framework. These consultancy services allow us to spot weaknesses and vulnerabilities and then advise the bank on the best practices to minimize their risks and harden their security. Furthermore, we provide a number of products for enhanced security such as monitoring, file integrity protection, secure file transfer and encryption, event management using SIEM software, managed access and dual-factor authentication.

Software applications and payments solutions

Moreover, our development department has a vast experience in developing specialized highly professional software applications for private and public sectors, especially middleware and integration solutions between diverse systems and payment solutions. Our top-selling inhouse-developed products are AEG CPS and AEG SmartClear.

AEG Corporate Payment System (AEG CPS) is payment solution that enables banks to receive and handle the corporate requests of payments through different channels such as SWIFT, VPN private network or web-application, and on the other hand, allows corporations to initiate payment requests and monitor them. The application is user-friendly, flexible and dynamic, given that iit supports ISO 20022 and SWIFT MT messaging standards.

AEG SmartClear provides end-to-end management of the clearing process and can be all customized to match any specific requirements. It is compatible with different environments and very flexible in terms of implementation. The whole clearing work-flow can be monitored from within a user-friendly GUI.

AI and blockchain

Artificial intelligence (AI) is taking off in a variety of fields like telecoms, automotive, finance and payment systems - to name a few. As we contribute to the financial industry, we are aware of the changes taking place especially with the rise of blockchain and distributed ledger technologies. With our continuous research and development activity, we seek to leverage these cutting-edge technologies and deliver better products and services to our clients.

In fact, we are soon to release an application that combines these two technologies together, as we are now in the course of developing a smarter gpi-PRO solution through integrating AI in it. AEG gpi-PRO is dedicated to create gpi payments and allows the bank and its client to track their payments in real time. It enables SWIFT gpi by converting corporate payment requests into gpi payments and by encapsulating gpi business logic and SLA requirements in payment transactions. It integrates gpi with the functionalities of the back-office system and helps the banks offer tracking capability to their clients. With AI, the application will have the capability to learn the choices of users, shortest routes, lowest exchange and transaction fees. It will therefore become capable of advising and taking action in a more optimized manner.

About Dr. Mohamed Sadek
CEO and founder
of Allied Engineering Group

Dr. Sadek, PhD in Computer Engineering, has founded AEG in 1994 to serve the financial industry and banks in the field of developing applications and software systems required to enhance their operations and offered services.
Launching a certified SWIFT Service Bureau in 2003 with a wide range of offerings, Dr. Sadek was able to take the business to a whole new level providing indispensable services to the banks. Over the years, he was able to establish strong relationships with elite customers in the Middle East and Africa.
He helped make AEG one of the leading software providers in the region and is still aspiring to achieve and expand more.

PLATFORM REALITY: CORPORATE BANKING IN A HYPERCONNECTED WORLD

The momentum towards adoption of open APIs and platform banking has gathered significant pace in the global financial services industry. The question is no longer whether banks adopt new technologies that enable collaboration with third parties such as fintechs, independent software vendors and academic institutions, but when and how rapidly they can make the transition to stay ahead of their competition.

In Accenture's global Technology Vision 2019 survey[1], which polled 784 bank business and IT executives from 30 countries, 96% said the pace of technology innovation in their organizations had accelerated over the previous three years.

The drivers for the evolution of the banking industry are clear. IT teams are under pressure to achieve more with less and to reduce the cost of running resource-hungry legacy systems. Corporate banks' customers want to have a more digital, transparent experience in line with the changing expectations set by interactions with digital-first companies and e-commerce platforms.

Too big to ignore

And the projected impact on revenue from Open Banking cannot be ignored. The Accenture Open Banking for Businesses Survey 2018[2] found that more than half (54%) of global banks predict they will derive between 5% and 10% of revenue growth from Open Banking services for SMEs and corporates in the next three to five years. A further 35% expect to secure between 10% and 20% of revenue growth from the same services over the same time period.

Corporate banks that have not yet got on board need to make the functionality in their existing core systems accessible using open APIs and become part of the wider ecosystem. If they fail to act, they will run the risk of losing out to new competitors such as Amazon, which has already issued $1 billion in loans to 20,000 merchants; WeChat, which hosted daily payments volumes of more than $1 billion in 2018; and Maersk, which provided $200 million worth of trade finance last year.

While risks are high, huge opportunities are there for the taking. Regulatory change, including LIBOR and PSD2, is contributing to the need for an adaptable IT infrastructure

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[1] https://www.accenture.com/us-en/insights/banking/technology-vision-banking-2019
[1] https://www.accenture.com/_acnmedia/pdf-90/accenture-open-banking-businesses-survey.pdf#zoom=50

Torsten Pull
Senior Vice President & General Manager
for Corporate Banking at Finastra

Torsten is responsible for continuing and expanding Finastra's leadership position in the Corporate Banking space, where it is a key global provider of all of the functionality that a business requires from its bank. Under his purview fall all Corporate Banking products and solutions, covering Lending, Trade, Supply Chain Finance, Cash Management, Corporate Channels, and Connected Corporate Banking components, such as Master Data Management, CRM Integration and Analytics.

He is accountable for Product Strategy, Product Management, Development, Quality Assurance and Delivery of all new product releases; as well as enablement of Sales, Professional Services, Customer Support and Partners. Torsten joined Finastra in July 2018, coming from Deutsche Bank where he spent over 19 years in various leadership positions in Investment & Transaction Banking Technology. He holds a MSc in Business Economics from the University of Trier.

that can be leveraged to satisfy existing and emerging requirements for trade finance, business loans and payments services. Financial institutions that can provide a transparent, low-cost and frictionless experience will be in the best position to tap into those opportunities.

Mental blocks

So what's stopping them? The biggest challenges that banks face when responding to all of this market volatility and velocity are the same as they have been for decades. IT is often siloed and difficult to change, budgets are reduced, and skills shortages are growing. All of this is exacerbated by the 'Not Invented Here' syndrome which has seen so many financial institutions building their own technology in-house.

Research from Celent[3] identified that one of the biggest barriers is caused by a strain on available resource, due to the need to manage business as usual, and the speed of innovation that's required to keep up with competitors.

The good news is that, by using open APIs, corporate banks can harness innovative technologies to interface with their traditional core processes via platforms.

This means they can accelerate plans to improve operations and meet clients' expectations for a better service, ultimately enabling them to remain competitive and win more business without completely changing their infrastructure.

As Gareth Lodge, Senior Analyst at Celent, observes: *"Banks know they need to innovate, and the more technically-savvy [...] of these firms see platformification as a gateway to faster, more successful innovation efforts."*

Working with fintechs means banks can offer new and attractive innovations to their customers quickly by curating fintech partners in an ecosystem that blends their creativity side-by-side with core banking functionality.

As well as collaborating with fintechs, banks look to strategic vendors like Finastra to partner with them on connected, service-oriented solutions driven by open APIs to fulfil the promise of digitizing end-to-end customer journeys and transforming bank operations.

Neil Ainger, Worldwide Research Manager for Corporate Banking at IDC, explains: *"Increasingly, an end-to-end (E2E) capability spanning and integrating the disparate services of a corporate bank, from lending to trade finance, is a key selection criterion. This helps efficiency and services, enabling corporate banks to compete more effectively in the future by knitting together the entirety of their offerings."*

IDC's MarketScape, 'Worldwide End-to-End Corporate Banking Solution Providers 2019 Vendor Assessment'[4], further explains: *"An efficient end-to-end omni-channel solution provides core bank processing capabilities and spans key functions, such as treasury and lending, to ensure a good customer experience and readily accessible data for internal bank clients. [...] Only banks that can provide it – with the help of their solution providers – will survive the squeeze in this marketplace."*

The digital age rewards change, different thinking and innovative solutions to customer challenges. Platform reality will enable banks to adapt to this rapidly changing world – to ensure they stay relevant and secure their share of emerging opportunities.

[1] https://www.finastra.com/sites/default/files/documents/2018/10/unlocking_innovation_constraints_with_platformification_infographic.pdf
[1] https://www.finastra.com/viewpoints/market-insights/idc-corporate-banking-marketscape-leaders

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FINANCIAL CRIME AND THE DIGITAL ID REVOLUTION

The increasing sophistication of financial criminals means organisations must embrace technology and industry-wide collaboration like never before. In the latest part of our series, we explore how the digital ID revolution can #FightFinancialCrime and enhance the KYC due diligence experience.

1. Financial criminals are increasingly sophisticated in the digital age, meaning financial institutions must adopt a fresh approach to fighting corruption.
2. The use of digital ID to fight financial crime is gathering momentum, driven by inter-connected factors such as greater connectivity between entities.
3. Refinitiv offers fast, reliable digital ID verification and screening through seamless API technology to help #FightFinancialCrime.

In our 2018 True Cost of Financial Crime survey, it was revealed that 47 percent of organizations had fallen victim to financial crime. Within this, 55 percent of publicly listed companies and 45 percent of private companies experienced some form of financial crime in their global operations in the year preceding the survey.

But the financial cost of these crimes aside, it's important to take into account the wider societal and humanitarian impact of such widespread corruption.

Patricia Moreira, Managing Director of Transparency International, reminds us that "corruption is a global phenomenon, and its effects go beyond what people usually imagine. This is because corruption has a very lasting impact on almost all dimensions of people's daily lives".

In Transparency International's annual Corruption Perceptions Index, the majority of countries appeared to have made little-to-no progress in ending corruption in 2017, with two-thirds of countries scoring less than 50 on a scale of 100.

Given the pervasive nature and devastating consequences of financial crime, and the fact that criminals are becoming ever more sophisticated, the financial services industry needs to fight back with renewed efficacy.

Keeping digital transactions secure

Criminals are increasingly targeting financial institutions as the place where they generate illicit funds, for example through account takeovers or cyber crime.

One area worth discussing in more detail is the payments industry.

Refinitiv, in partnership with the Emerging Payments Association and Barclays, has produced a report suggesting a number of best practice solutions for combating corruption, specifically in the payments sector.

These solutions include rigorous Know Your Customer (KYC) screening and ongoing monitoring of all third-parties, which must be underpinned by credible, reputable data.

There is also the deployment of cutting-edge technology, including machine learning and behavioral analytics that can be leveraged to help identify unusual behavior or other anomalies.

The paper goes on to suggest that a common digital identity solution is the next step in keeping digital transactions secure and safe from fraudsters, stating that a "digital identity in the UK is a core enabler for ongoing take-up of digital services, facilitating both convenience and security for users".

James Mirfin,
Global Head of Digital Identity and Financial Crime Propositions, Refinitiv

On behalf of Refinitiv, James leads the global portfolio of financial crime propositions, including World-Check and Digital Identity. He is leading the strategic conversations with financial Institutions, regulators and industry partners around the world as they battle to identify "who's there" when they onboard and transact with their customers.

James started his career in the UK, and spent 16 years in Asia in senior leadership roles with American Express, PayPal and Thomson Reuters, living and working in Singapore, Thailand, India and Hong Kong, before relocating to New York early in 2018.

Digital ID to fight financial crime

The digital ID revolution is gaining momentum, driven by several interconnected factors, including:

- Regulations that mandate enhanced consumer privacy and protection.
- Consumers who demand choice, flexibility, and an omni-channel experience.
- Technological advances that enable new entrants in the banking sector with low barriers to entry.
- The increasing use of digital channels across the globe.
- Greater connectivity between entities.

Perhaps the strongest driver of all, however, is the growing need to protect against sophisticated financial criminals.

In response to this digital revolution, Refinitiv is investing in and developing new digital solutions that offer fast, reliable identity verification and screening through API technology.

KYC and the client experience

Manual, often paper-based KYC customer due diligence processes can be time-consuming, inefficient and costly, but more than this, they often lead to rising customer frustration levels.

Complex data handling and privacy regulations must be weighed against conducting adequate due diligence.

Striking the right balance can be highly challenging. There is also the critical issue of ensuring the security of confidential customer data, while simultaneously keeping their frustration levels at bay.

For example, passwords and knowledge-based authentication can be highly trying for tech-savvy consumers who expect speed and frictionless service.

Power of collaboration

The digital ID revolution has the power to solve many immediate challenges in the KYC space, but ultimately the key to winning the war on financial crime will involve widespread collaboration and a commitment to working together to share insights and best practice solutions that can outwit sophisticated financial criminals.

Moreira supports this view, commenting that "corruption is, by its nature, a complex phenomenon that involves a number of different actors and factors.

"To be able to effectively fight corruption, we need the engagement of different actors coming from the public sector, the private sector and from civil society."

HOLISTIC TRADE SURVEILLANCE: AN INVESTMENT WHICH MAINTAINS COMPLIANCE AND PROTECTS REPUTATION

In the world of compliance, the necessity of a strong surveillance program is increasingly of paramount importance to meet the needs of a growing list of global regulations – and avoiding being named and shamed as non-compliant. Perpetrating an array of market abuse is also part of the ultimate goal. This year, many lessons were learned from the mistakes of companies that attempted short cuts in their compliance programs that ultimately cost them reputational harm, in addition to some record-breaking fines.

So, what's next as financial services organizations look to avoid an apology compliance tour?

Inside of the world of surveillance, the benefits of achieving true Holistic Surveillance as the ultimate state are immense. Leveraging the latest in artificial intelligence, analytics, and tools across a vast variety of data sources, financial services organizations can gain huge improvements in employee efficiency, reduce the cost of compliance and more accurately detect risk (both which are readily apparent and those which are unknown). The ability to intelligently discover all facets around market manipulation has the potential to save firms potentially millions in fines from regulations, as well as insulate them from reputational damage. And the market bears this fact out; firms are investing nearly $1.2 billion annually into surveillance technology to try to help them solve the legacy challenges around surveillance.

Unfortunately, there are still significant challenges left to solve as we move toward a true holistic compliance operational environment within our financial insitutions. While 'Holistic Surveillance' has been the talk of the market for nearly a decade, many financial services institutions and some surveillance vendors have not effectively cracked the nut on integrating a "True Holistic Trade Surveillance" solution. The challenges around leveraging structured and unstructured data from multiple disparate systems, limitations in existing technology, data latency and accessibility have been cited as the reasons while a true holistic solution has been largely absent on the market – until now.

Recent regulatory developments are causing this development to become even more necessary. As regulators look to require additional data sources to be captured and analyzed together in order to prove intent, and often in increasingly tight timelines, a holistic compliance goal needs to be considered as the one sure way of addressing these requirements.

Global Regulatory Demands Continue to Grow

In recent years, trading volumes have exploded. For example, over the last fifteen years options trading volumes have grown over 600 per cent. And as volumes have increased, and perhaps on the back of those issues caused by high profile cases as well as the financial crisis, regulators are determined to restore consumer confidence in financial markets. Across the globe, regulators have realized that market manipulation, fraudulent behavior, money laundering and suitability violations don't happen in a vacuum.

Dating back to 2013, Dodd-Frank established the first requirement to record trader communications, as well as to marry different data streams and implement the requirement to 'reconstruct trades' in 72 hours as a measure to guard against market manipulation. The European Securities and Markets Authority (ESMA) and its Market Abuse Regulation (MAR), issued only a few years later, was also highly prescriptive and required firms put in place a several typologies to cover all the regulations. MAR also created the requirement to prove "Intent" to manipulate the market. Commonly, this involves not just collecting the trading data but also all communications, both voice and eComms, and analyzing them together to prove purposeful wrongdoing.

Even still, global regulators are continuously pushing new regulation to further crack down on market abuse while protecting their citizens' best interest. In just the last few months, regulators have started to weave in new requirements to collect, marry and analyze a variety of traditionally divergent technologies and data – reflecting just how holistic surveillance is expected to work.

Lee Garf,
General Manger for Compliance, NICE

Lee Garf is the General Manger for Compliance, NICE and is responsible for the award winning Holistic Trade Compliance solution suite, which combines communications capture, trade and communication surveillance capabilities. Mr. Garf oversees product strategy, product marketing, product delivery, go-to-market planning across all NICE Compliance solutions. As the leader of this business, Mr. Garf is responsible for growing our market-leading position and ensuring continuous innovation to meet the needs of financial firms around the world. Just prior to joining NICE Systems, Mr. Garf was Executive Vice President, Product, at Charles River Development (CRD). Mr. Garf holds a B.S. in Mechanical Engineering from Cornell University and an MBA from Northeastern University.

As an example, in the United States, Regulation Best Interest (Reg BI) was introduced, reinvigorating the spirit of the former Fiduciary Standard and putting a new burden on broker dealers to go beyond the existing suitability regulations to raise their standard of conduct requiring the intersection of Suitability and Sales Practices technology as well as Communications Surveillance.

In Singapore, MAS and SGX RegCo recently issued a new set of guiding principles around developing and implementing best practices in their trade surveillance operations, including automating surveillance systems, capturing all communications and leveraging new analytical techniques like machine learning and artificial intelligence.

Clearly, doing nothing is no longer an option for financial services organizations around the world. We have recently noted that regulatory activity is now leading to increased enforcement actions – and they are making headlines. According to recent data, enforcement actions are on the rise and will likely double over the previous year by the time 2019 concludes. Unless FSOs effectively address their Surveillance operations and integrate more advanced and automated approaches, these new regulations and requirements are going to create continual operating nightmares moving forward.

Solving the Holistic Challenge

As regulations continue to push more demanding standards, effectively complying with them requires an application of increasingly advanced technology and new ways of thinking about surveillance. Proving intent of malfeasance requires an enormous amount of data from a vast variety of channels, enough manpower to shift through an increasing volume of alerts, and technology solutions to look beyond the easily detectable issues to find the critical items which Firms might not have considered.

This next generation of surveillance technology as we are seeing takes a fundamentally different approach to surveillance than what is commonly available. Rather than looking at events in isolation, these solutions are taking a situational approach to understanding all relevant actions, applying multi-dimensional advanced analytics to determine any manipulation actions, to piece together disparate data sources and deliver a single alert for review. All the while, increasing the probability of finding true risk and developing a clear understanding of what was found.

As we continue to see surveillance technology evolve to meet regulatory requirements and address operational risk more fully, NICE Actimize and analyst firm JwG have recently undertaken the production of the market's first holistic maturity model, detailing the status and projected rise of holistic surveillance. As the two firms view it, currently many financial services organizations are operating in some type of silo – either completely separated or with a single case manager which aggregates alerts for the independent systems.

Today, these existing siloed surveillance solutions cannot automatically take in multiple data streams, like voice or eCommunications with trade data, and this leads to significant gaps in compliance operations, as manual intervention is typically required to effectively sort through and understand the data. Those solutions only look at events in isolation, and rarely provide context around activities. This already creates significant challenges in proving intent, as required by MAR, and it is nearly impossible to comply with something more modern like Regulation Best Interest. This model indicates that it may be a big leap to the future for some organizations.

But, continued regulatory pressures and advances in technology continue to push firms up the holistic maturity model and help accelerate the development of the next generation of surveillance. As next-generation surveillance is fully adopted, only then will the long-standing promises of true holistic surveillance be realized, more consistently meet regulator expectations and restore market confidence moving forward. We stand ready with the market's only true holistic surveillance approach as the industry evolves – after all, we don't want any of you to be on the next compliance apology tour.

HOW PAYMENTS HAVE TRANSFORMED ONLINE MARKETPLACES

Anna Tsyupko,
CEO and co-founder of Paybase

Anna Tsyupko is the CEO and co-founder of Paybase. She has a passion for payments and the opportunities that eMoney infrastructure can offer. The Paybase platform streamlines payments, compliance and risk management into a simple API, enabling platform businesses to transform payments from a painful afterthought into a competitive advantage.

PAYBASE_

In July 2019, data provider Statista valued UK e-commerce sales at approximately £586 billion. In a growing market, these figures will continue to rise.

Smart marketplaces, or smarketplaces, are the latest triumph in the evolution of e-commerce and retail technology. They combine the popular online platform buyer/seller marketplace model (e.g. Etsy) with more complex data insights, enabling businesses to better serve their customers. Integral to this is purchasing data. It allows businesses to begin to infer their customers' taste and habits – but in order to do this, platforms must first integrate payments into their native ecosystem.

The evolution of the marketplace

Online marketplaces were born in the early 2000s with the advent of the internet. They began with online directories and classifieds platforms like Craigslist and eBay respectively; however, these early-generation platforms didn't have payments integrated into their ecosystems. Instead, buyers and sellers would make their payments offline. This not only limited the insights that platforms could gather about their users but it restricted their business opportunities as well. Without knowing selling prices or the payment methods, platforms could neither record and utilise user trends nor take a cut of the transactions.

In 2002, eBay acquired Paypal for $1.5 billion. The significance of this was twofold – for the first time, eBay could access their users' purchasing data, and users could transact without the same concerns about trust. With this change, others followed suit.

Today, marketplaces can not only integrate payments into their own infrastructure but they are more granular. Owing to the current monopoly of horizontal market giants like Amazon and Facebook, there has been an emergence of more vertical-focused marketplaces (e.g. Habito for mortgages) and on-demand marketplaces (e.g. Deliveroo for takeaways). The space has been further revolutionised by the use of data-rich features like location technology, giving businesses the ability to maximise personalisation and CX.

The trouble with marketplaces

A Sharetribe article about how to launch an online marketplace contended, "The reason marketplace businesses scale so well is that you don't have to own your own inventory to run one." While this is true, marketplaces are not without their hurdles, many of which can be tackled with innovative payments technology.

1. Marketplace Liquidity

Marketplace liquidity is finding the balance of buyers and sellers required to enable a marketplace to succeed. This is no easy feat. A marketplace with too few buyers will turn sellers off; a marketplace with too few items for sale will not attract buyers. In such a saturated market, knowing how to attract either buyers or sellers to join a platform is a challenge in itself, and for a smart marketplace, it is more difficult still. Also known as a double cold start, smart marketplaces have to consider both supply and demand and training data as well – data built into algorithms to enable more complex, personalised capabilities.

2. ***Trust***

Evident from the early-generation platform business era, while a platform relies on strangers trusting each other to transact, the platform's ultimate reputation can be easily jeopardised by those in its network. Without accepting payments natively, it's very difficult for a marketplace to maintain control of its product.

3. ***Growing consumer expectations***
The saturation of the platform economy has both increased competition between brands in similar verticals and raised the bar of what consumers expect – and those unable to meet these demands will quickly fall behind. Innovation partner, Cambridge Design Partnership articulated: "What is needed in payment is a fresh look at what the consumer actually wants. They want convenience, an easier life. They want joy in the retail experience." Payments must be frictionless, intuitive, secure and fast, and without end-to-end management, this is difficult to facilitate.

The value of integrated payments

It is no coincidence that all of the major online marketplaces have integrated payments into their ecosystems. E-commerce UX researcher, the Baymard Institute found that historically, the average shopping cart abandonment rate is 69.5%. For marketplaces that accept their own payments, this hurdle can be tackled with re-marketing campaigns, promotions utilising purchasing data etc. but when the basket is based off-platform, the business has no insight into what caused the abandonment. Accepting payments on-platform is, therefore, not just an invaluable tool to retain buyers and sellers but it is crucial for a business to upgrade to a smart marketplace.

In terms of trust, unlike the difficulties faced by early-generation platforms, Tech Crunch asserted that "social media removed trust barriers between users, and the ease of taking high-quality photographs made selling goods easier, and increased trust on the part of the buyer." Escrow has enhanced this further. Popular within the platform economy, escrow is the act of holding funds in a third party account when a payment is made. Once both parties are happy, the transaction can be authorised and the funds released.

To read more about escrow, download our whitepaper.

Download now at www.paybase.io/escrow-whitepaper

More generally, integrated payments can also be used to enhance a marketplace's offering. They improve the customer experience, enable more seamless transactions and, with 5G on the horizon, soon more transactions will take place on mobile. They will be faster; more secure; they will be used in more verticals, and customer expectations will be raised once more. In order to future-proof for this advancement, online marketplaces should integrate payments into their ecosystem early to avoid falling behind the competition.

Power to the payments provider

Following PSD2, platform businesses are no longer permitted to hold customer funds. In order to be able to accept payments on-platform, an online marketplace must now be regulated as a financial institution, or be partnered with someone that is. Without the time or inclination to become regulated, partnering with a payments provider is the best way to integrate payments into a product ecosystem compliantly. Doing so enables businesses to focus on innovation and get to market without delay.

Escrow is one of many features offered to online marketplaces by innovative payments providers. At Paybase, for example, we facilitate business-critical features such as instant payouts, escrow services, tiered merchant fees, re-loyalty programmes, buyer/seller rewards after x sales/purchases etc., enabling businesses to effectively tackle both teething and growth hurdles.

We enable marketplaces to build with a crucial level of flexibility, allowing them to match their payment flow exactly with their product flow. It is this flexibility that could give a business the tools to become a smart marketplace and truly stand out from the competition.

At the rate at which technology is developing, closely accompanied by consumer expectations, it is inevitable that online/smart marketplace payments will become more intuitive, more personalised and more intertwined with the products that they support. Ultimately, making payments a first – rather than final – consideration could not only be the difference between a business succeeding or not, but it could transform payments into a marketplace's disruptive, defining feature.

LIBOR & LEGO

UTILIZING MACHINE LEARNING TO IDENTIFY AND CATEGORIZE LIBOR FALLBACK TERMS

LIBOR Fallback Terms & DEFCON 1

In his February 26, 2019 speech at the SIFMA C&L Society Luncheon, Michael Held, General Counsel at The Federal Reserve Bank of New York stated, *"When you looked at the underlying contracts that used LIBOR, they didn't provide very well for LIBOR simply disappearing. This is a DEFCON 1 litigation event if I've ever seen one."* He outlined two key tasks for market participants with LIBOR exposures: *"stop writing new contracts on LIBOR and start using SOFR or at least another robust alternative"* and address *"the trillions of dollars of existing contracts that extend past 2021 and don't have effective fallbacks."* Held emphasized that *"inaction at this point in the LIBOR transition is short-sighted and futile and only extends the uncertainty. We need decisive action by everyone in the market to avoid damage to individual firms and the financial system."*

Historically, LIBOR for a particular interest period was determined by averaging quotes of several reference banks as of approximately 11:00 a.m. London time. Today, LIBOR is determined by reference to a screen quote from a customary market quotation service, such as Reuters or Bloomberg, with reference bank quotes used only as a fallback if the screen quote is unavailable.

Seems straightforward enough but fast forward to July 27, 2017, when Andrew Bailey, the FCA's Chief Executive, announced that, after 2021, the FCA would no longer exercise its authority to compel panel banks to submit quotes used to determine LIBOR. In his speech, Mr. Bailey emphasized that there are insufficient underlying interbank transactions to continue to rely on LIBOR as a benchmark, noting that it is unsustainable *"for market participants to rely indefinitely on reference rates that do not have active underlying markets to support them"*.

Currently, LIBOR serves as the reference rate for an estimated $400 trillion of financial contracts, including: commercial/retail/securitized/syndicated loans, floating rate notes, derivatives, and swap/hedge agreements. The outstanding financial products referencing just the USD LIBOR are estimated to be approximately $240 trillion in notional value. For financial institutions and corporates around the world, the transition is massive and fraught with the potential for legal and operational risk…and the clock is ticking.

For the past several years, regulators and industry leaders around the world have been collaborating on policy initiatives to transition to alternative, nearly risk-free reference rates (RFRs). Given LIBOR's lost relevance as the "world's most important number" these initiatives have evolved from policy development to pragmatic execution as the conversion of agreements that reference LIBOR with maturities beyond 2021 to an alternative reference rate will be critical for market stability.

The Underlying Complexities of the LIBOR Transition

The related operational transition is enormous as it includes managing outstanding positions, transitioning to new non-LIBOR products, and reworking significant industry infrastructure. Client and bank economics are impacted; certain businesses such as derivates, corporate trust and mortgages are in effect "ground zero". Further, significant conduct risk exists for any LIBOR-based products sold that extend beyond 2021.

Fallbacks for legacy positions entail high risk as these terms are buried in documents (i.e. unstructured data) not captured by automated systems. For financial institutions the challenge will be balancing the economic impact against client needs, conduct, legal and reputational concerns while ensuring readiness. Imagine the overwhelming manual task of reviewing thousands of contracts across lines of businesses and products to organize and prioritize the needed transition work. A handful of examples include the following:

Corporate Trust Services
Corporate Trusts provide trustee, agency and fiduciary services for bondholders, investors and lenders for asset- and mortgage-backed securitizations, municipals, and warehouse/conduits. Documentation issues abound as fallback language is largely not captured in systems and the documentation likely exists in multiple areas or by product.

Syndicated Loans
Legacy credit agreements in the U.S. syndicated loan market typically have fallback mechanisms in the event that LIBOR is temporarily unavailable. Although variations exist, the LIBOR definition may provide that if the screen rate is unavailable, the rate is determined by interpolating between LIBOR rates of other specified dura,tions, or by the rate offered to the agent bank by major banks for U.S. dollar

Ann Heron,
Chief Strategy Officer, Pendo Systems

deposits in the London interbank market for delivery on the first day of the interest period in the approximate amount of the loans, however, these fallbacks are inadequate if LIBOR no longer exists.

- Market disruption clauses addressing a temporary unavailability of LIBOR or other trigger event by establishing fallback pricing at an alternative base rate are not a solution as borrowers would be dissatisfied with more expensive base rate pricing on a permanent basis if LIBOR disappears.
- Some provisions allow the agent alone to select a comparable or successor rate and apply it in a manner consistent with market practice.
- Others provisions allow the agent and the borrower to choose a successor rate, with many, but not all, of these provisions giving the majority lenders affirmative or negative consent rights to the successor rate amendment.
- Some replacement rate provisions are drafted narrowly to refer to a successor reference rate or index rate, suggesting that only a new benchmark can be selected without making other changes.

Collateralized Loan Obligations (CLOs)

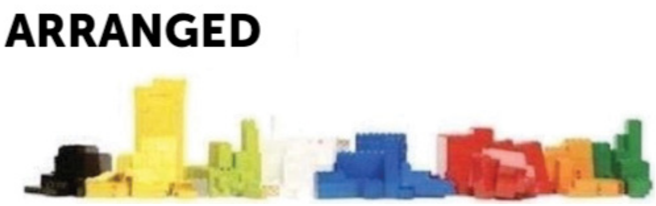
Indentures in the U.S. CLO market often contain a fallback provision if the LIBOR screen rate is unavailable on the interest determination date. In that case, the calculation agent would request quotes from reference banks in the London interbank market and determine the rate based on the mean of the quotes provided. If an insufficient number of quotes are obtained, LIBOR for the subject interest period will be LIBOR as calculated on the prior interest determination date. Since reference banks no longer will be providing quotes if LIBOR becomes permanently unavailable, this mechanism effectively turns floating rate obligations into those of a fixed rate instrument, which is not what investors bargained for.

Examples could go on and we haven't touched on Floating Rate Notes, Derivatives or Swaps…

All of the Answers are Held Captive by Unstructured Documents

Suffice it to say, the core challenge faced across the financial services industry is the ability to effectively and efficiently identify and categorize by common types terms and conditions the relevant corpus of contracts that must be transitioned from LIBOR to an alternative reference rate. Add to this the need for auditable, evidence-based data lineage for contract remediation efforts and certain, future litigation. The reality is that systems of record that support LIBOR-based businesses typically contain single-purpose, transactional data as there were no fields envisioned to capture this extraneous context (i.e. LIBOR fall back terms).

It is estimated that 80-90% of the information needed for the LIBOR transition is trapped in unstructured documents which are unsearchable for metadata identification and extraction. As such, the current state approach to mining the corpus of LIBOR contacts



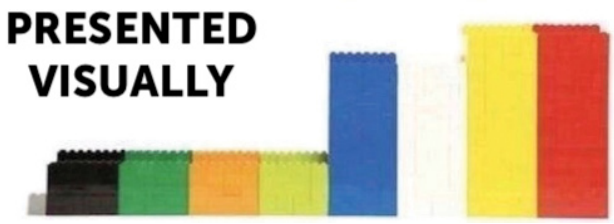
would be manual, mind-numbing and expensive task that will not create enduring value for an organization as it is viewed through the lens of a one and done event. I believe that this one-off view to LIBOR remediation is an opportunity.

In speaking with professional services and law firms, the consensus is that a manual approach is untenable given the projected fees, the looming deadline, the need for accurate classification of contract types across millions of contracts. Quite frankly, it is not the best use of this top talent. In our discussions with the market, we are hearing is that a traditional approach to identify the contracts that require repapering will not scale as the LIBOR transition clearly requires a digital solution and time is the enemy.

Forging a Human & Machine Learning Partnership to Structure Contractual Data

Pendo's Machine Learning Platform can digitize unstructured data at enterprise scale to create data sets primed for downstream processing, insights and analytics. By utilizing Pendo for the LIBOR transition, our clients and partners are transforming the corpus of unstructured contracts into machine-readable format to accelerate the identification and extraction of critical data elements needed to advance this work in an effective, efficient, economically sound and evidence-based manner.

Pendo's approach to wrangling the unstructured data underpinning LIBOR transition programs allows our customers to define the critical data elements needed to determine the scope and scale of the remediation work. For example, Pendo can search through millions of contracts and index the ones that extend beyond the 2021 deadline and extract the 30 to 40+ data elements needed to categorize the fallback terms, legal triggers (i.e. reasonable, discretion, etc.) and provisions. The output generated by Pendo is essentially a matrixed view of an enterprise's LIBOR contracts which enables our clients and partners to manage the legal and operational transition while minimizing costs and risk.



Creating Competitive Advantage by Transforming Unstructured Data

Beyond the work at hand for the LIBOR transition by digitizing your LIBOR documents via Pendo your contracts are instantly transformed into digital assets the enterprise can use for both the LIBOR transition as well as any future needs.

pendo systems

LIBOR FALLBACK ENGINE

LIBOR: 'A DEFCON 1 LITIGATION EVENT'
FIGHT BACK WITH PENDO SYSTEMS FIT FOR PURPOSE SOLUTION

The Pendo LIBOR Fallback Engine is a unique, automated capability that quickly and accurately digitizes unstructured source documents and surfaces key libor fallback terms & conditions. Our fallback engine uses a proprietary, Domain Specific Language that enables the engine to navigate thousands of different LIBOR contract types using a set of custom-designed utilities and functions that make rules and scripts more flexible and accurate.

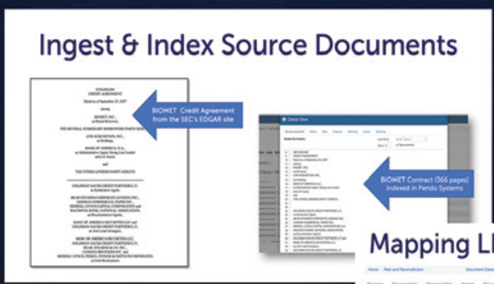
The engine allows users to:

-Easily identify the documents that contain LIBOR T&Cs and separate them from non-LIBOR documents

-Quickly create structured, machine-readable data sets across all LIBOR contract types (e.g. organized by variations in T&Cs)

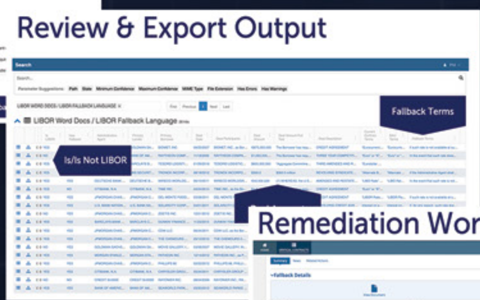
-Simplify the management of the remediation process by deploying a workflow tool that ingests the machine-readable content Pendo creates

-Automate the creation of cradle-to-grave lineage for all LIBOR data extracted directly from your original source documents in Pendo for evidence-based results

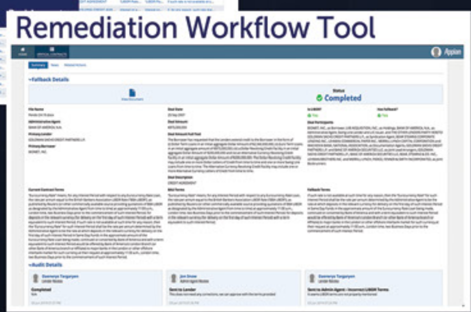


STEP 1

STEP 2



STEP 3



STEP 4

BOOTH 43C INNOVATION ZONE

Visit us for a live demo of the Pendo LIBOR Fallback Engine and your chance to win a free, limited POC

FOR MORE INFORMATION CALL 973.735.5788 OR VISIT WWW.PENDOSYSTEMS.COM.

FUTURE PROOF COLLATERAL: THE PRESSING NEED TO FULFIL IM REGULATIONS

Compliance with initial margin rules for uncleared derivatives is playing out for phase 4 and 5 firms. Trevor Negus, Product Manager of SmartStream believes that organisations .should not simply plump for solutions that just fulfil immediate compliance requirements but consider technology that offers better long-term protection against future change.

September 2016 saw the introduction, following globally coordinated efforts by regulators, of the first phase of BCBS IOSCO initial margin (IM) requirements for non-centrally cleared derivatives. The opening wave of compliance affected only the largest financial institutions but now far smaller companies are finding themselves caught: phase 4 firms came into scope in September 2019, while the final tranche of organisations (phase 6) is due to comply by September 2021. Whilst Phase 5 will have a particularly great impact on the buy-side, with as many as 800+ entities brought within the IM regime.

Compliance with BCBS IOSCO initial margin standards for non-centrally cleared derivatives creates a number of hurdles for firms: both parties to a deal must exchange initial margin, with initial margin being calculated on a daily basis, at a netting set level, and then posted to a segregated account.

How should Phase 6 firms best proceed? Manual processes are unlikely to provide a satisfactory way forward, and so firms will need to look at introducing greater levels of automation. With compliance deadlines looming, some companies may choose to opt for a basic collateral management solution, considering it the quickest and cheapest route to compliance. Yet a mature system could, in the long-term, provide a far more cost-effective answer, and one which better equips firms to deal with future change.

The question of future regulatory change is especially worth keeping in mind. To date, regulators have worked in unison on the creation of margin rules for uncleared derivatives. Typically, basic collateral management systems have been designed to answer the needs of a harmonised regulatory world. In contrast, a

SmartStream

Trevor Negus,
Product Manager, SmartStream

Trevor Negus is product manager for TLM Collateral Management concentrating on the new IOSCO regulations. Previously he worked within Investment Banking for over 20 years, starting his career at Salomon Brothers in the fixed income and equity settlements team. This was followed by positions on the securities lending desk and in convertible bond sales.

After a move to Deutsche Bank working on the repo desk he moved into collateral management and has spent 15 years in this field. Initially heading up the collateral new business team, he went on to manage the margining team responsible for OTC, Repo and Real Time FX Margining. Trevor transitioned to the vendor side in 2006 where he worked as a BA and SME at Algo and IBM, working on projects relating to Approvals, Asset Pools and Clearing. Trevor holds a Degree in Economics and Politics.

sophisticated solution will enable financial institutions to handle the complexities that a diverging regulatory landscape could present. More contentiously, should firms choose to arbitrage the opportunities such a landscape presents, a specialist system will support them most effectively to do so.

A system that is proven to cope with the complexity inherent in IM compliance is SmartStream's TLM Collateral Management. The solution allows a high degree of automation, reducing the effort associated with moving collateral between counterparties. It also takes an exception-based approach, enabling financial institutions to better accommodate the growth in margin calls IM rules are likely to stimulate.

SmartStream's TLM Collateral Management system has been installed by a number of Tier 1 and 2 financial institutions. Mutualised knowledge from these projects has been incorporated into the design of the solution and firms preparing for IM regulation can take advantage of this shared experience.

Fears over cost and long implementation times may dissuade some financial institutions from considering a sophisticated solution. TLM Collateral Management can, however, be deployed on demand. Firms are able to benefit from its "Tier 1 DNA" without the need for either a lengthy installation phase or for heavy investment in infrastructure, meaning that the solution can be adopted easily and cost-effectively. Regular software updates also ensure that maintenance costs are minimised.

One significant advantage offered by TLM Collateral Management is the fact that it does not commingle data. This is an important security consideration, for where a firm's proprietary data is commingled it could – in the event of a breach – become apparent to competitors, leaving a company exposed to potential financial or reputational risks.

Underpinning the quality of TLM Collateral Management is the high level of investment made by SmartStream in its solutions. At present, some 25% of SmartStream's revenue is ploughed back into research and development. SmartStream's focus on investing in and developing its technology is also reflected in the partnerships it has created with a number of industry specialists.

One such partnership is a recent agreement with Cassini Systems, which will see the integration of Cassini's analytics platform with TLM Collateral Management to provide the SIMM™ (ISDA Standard Initial Margin Model) calculation as well as risk sensitivity generation. A similar collaboration with Numerix will provide sensitivity and SIMM calculation. In both cases SIMM results will be retrieved by TLM Collateral Management and then used in IM Margin calculations. Other industry partnerships include an integration, at a Tier 1 bank, of TLM Collateral Management and AcadiaSoft's software services, in order to help deliver margin call automation and STP.

Finally, TLM Collateral Management is just one part of SmartStream's suite of software solutions. Financial institutions are looking to expand automation projects beyond collateral management into other, linked areas, such as cash and liquidity management, in order to pull together different parts of their businesses. SmartStream's range of solutions can assist them to do this, as was evidenced by a recent implementation of TLM Collateral Management at a major UK bank. Following the project, the bank – pleased with the quality and testing of the software, plus the consistent, within budget delivery of the project – is now looking to expand into further TLM solutions.

In conclusion, the pressing need to fulfil IM obligations, coupled with concerns over cost, may lead some institutions to opt for the most basic of collateral management solutions. Yet once the initial rush to comply has passed, other considerations will begin to take over, including questions over cost-effectiveness, efficiency, consolidation, risk, the ability to adjust to future business and regulatory change, and so on. Less sophisticated systems could then show their limitations and firms may begin to ask whether small has really turned out to be beautiful, after all.

BRANCH TRANSFORMATION 2019:

WHY THE BANK BRANCH IS STILL RELEVANT IN AN INCREASINGLY DIGITAL WORLD

As more and more customers turn to online channels for their everyday banking, banks across the globe are re-evaluating the role of the bank branch and looking at how they can enhance layout, enrich the customer journey and innovate with new technologies to ensure the branch remains profitable and relevant to its customers. It is against this backdrop that strategic research and consulting firm RBR is organising its annual Branch Transformation 2019 conference and expo on 19th and 20th November in London. We asked Robert Chaundy, conference producer at RBR, what we can expect.

Financial IT: RBR's Branch Transformation event has been going for more than ten years now. Is branch transformation still relevant in today's digital world?

Robert Chaundy: It's more relevant now than ever. While it's true that many banks are cutting the size of their branch networks, it means that the outlets that remain are even more important than in the past – they have to offer customers what they want and need, and be places that they connect with. There are countless ways in which banks can improve and enhance the services that their branches offer – which benefits all of us.

Financial IT: Can't customers just do all of their banking online?

Robert Chaundy: Online and mobile banking has flourished over the last few years, which has been great for customer convenience, but these channels don't always work for everyone. For example, lower-income customers may find it difficult to access these channels, while older customers often prefer to interact face-to-face with bank staff. Younger customers may prefer carrying out everyday transactions on their phones, but when it comes to making big decisions like opening an account or applying for a mortgage, they still want to have those conversations face to face in a professional environment.

Financial IT: How can we expect our branches to change in the future?

Robert Chaundy: The major trend is that branches are moving away from being cash handling centres, where people withdraw money, pay bills, deposit cheques and so on, to retail outlets. Basic transactions will mostly be carried out either via online channels or at self-service machines, but branches will be places where people can consult with expert staff to make big financial decisions.

But there's no single definition of branch transformation. Some leading banks are combining branches with retail spaces, cafés and community centres. Others are introducing robotics and machine learning to give customers cutting-edge advice. In some markets banks are looking at sharing branch space, and in emerging economies, networking and computerising branches – something we may take for granted – is revolutionising how branches operate.

Financial IT: Why is Branch Transformation 2019 so important?

Robert Chaundy: This is a unique chance for banks to meet, network and discuss the key issues facing the industry. Alongside the two-day speaker programme, there is also a major technology expo, in which around 30 leading technology and service providers are demonstrating cutting-edge solutions. And with over 550 delegates from nearly 50 countries, this is a truly global event!

Financial IT: What sort of speakers and presentations are on the programme?

Robert Chaundy: We have a great speaker line-up this year, with both bank case studies and high-level keynote addresses from senior executives. For example, we have top British banks such as LBG and Barclays, focusing on branch design and the human element of digital banking; European giants like BNP Paribas and ING, discussing the challenges of omnichannel banking; and global players such as Standard Chartered, Citibank and Santander discussing digital and virtual branches.

Financial IT: How can people get involved?

Robert Chaundy: There are several ways companies and individuals can get involved. There are still a few spaces left on the agenda, and we are always keen to receive proposals from inspiring speakers with interesting branch transformation case studies. There are also various sponsorship and exhibition opportunities – although the exhibition has almost sold out! If you would like to speak, sponsor or attend, please contact me at robert.chaundy@rbrlondon.com. Further details including the full agenda can be found here: www.rbrlondon.com/bt

Financial IT: What other events do you have coming up?

Robert Chaundy: We have a busy few months ahead! First, ATM & Cyber Security 2019 is taking place in London on 8-9 October, followed by Branch Transformation 2019 on 19-20 November. Then on 18-19 March Self-Service Banking Asia 2020 event goes to Vietnam for the first time, and RBR's flagship Self-Service Banking Europe 2020 event takes place in London on 19-20 May. Visit RBR's website for more information: www.rbrlondon.com/conferences.

rbr EVENTS

Branch Transformation 2019
London 19th-20th November 2019
#BT19

Self-Service Banking 2020
Vietnam 18th-19th March 2020
#SSBA20

Self-Service Banking Europe 2020
London 19th-20th May 2020
#SSBE20

ATM & Cyber Security 2020
London 6th-7th October 2020
#ACS20

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Transform:Finance

Regulatory Reporting Innovation Forum

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Andrew Fleming, Global FCR MI Senior Risk Reporting Manager, HSBC

*Describing previous Transform Finance event.

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SOCIETE GENERALE | mastercard | B-SOCIAL | MIZUHO

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Special Sibos Issue

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COMPANY PROFILE	
Company type	Privately Held
Annual turnover	1,44 mil. Euro (2015)
Number of Customers Total	Undisclosed
Number of Employees	48+
Inception	1998
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	Alina Enache
Job Title	Sales Manager
Contact address	031281 Bucharest 3, 23C, Calea Vitan, Floor 3
Telephone number	(+40) 21 255 45 77
Email Address	sales@allevo.ro
Homepage address	www.allevo.ro

Finastra unlocks the potential of people and businesses by creating a platform for open innovation in the world of financial services. Formed in 2017 by the combination of Misys and D+H, we provide the broadest portfolio of financial services software in the world today – spanning retail banking, transaction banking, lending, and treasury and capital markets. Our solutions enable customers to deploy mission critical technology on premises or in the cloud. Our scale and geographical reach means that we can serve customers effectively, regardless of their size or geographic location – from global financial institutions, to community banks and credit unions. 90 of the world's top 100 banks use Finastra technology.

COMPANY PROFILE	
Company type	Private
Annual turnover	~$1.9 Billion
Number of Customers Total	9,000
Number of Employees	10,700
Inception	2017
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	Ryan Keough
Job Title	Executive Vice President, International
Contact address	4 Kingdom Street, Paddington, W2 6BD, London, UK
Telephone number	+44 (0)20 3320 5000
Email Address	https://www.finastra.com/contact/sales
Homepage address	www.finastra.com

(ICSFS) is a leading provider of modular, universal banking systems with offices in United Kingdom, Jordan, United Arab Emirates, Iraq, Saudi Arabia, Palestine, Sudan, Nigeria and Lebanon. ICSFS is a leading provider of a universal modular, core banking systems, whose success can be attributed to its turnkey offerings; ICS BANKS® and ICS BANKS® ISLAMIC, which serves and supports customers across the globe. ICSFS provides fully integrated universal banking applications that deploy solutions and a range of professional services to automate and streamline banking services on premises or in the cloud. www.icsfs.com

COMPANY PROFILE	
Company type	Limited Liability Company
Annual turnover	US$21M
Number of Customers Total	110+
Number of Employees	250+
Inception	2004
Geographical coverage	EMEA, APAC

COMPANY CONTACT DETAILS	
Contact	Wael Malkawi
Job Title	Executive Director
Contact address	2nd Floor, Berkeley Square House, Berkeley Square, London, W1J 6BD, UK
Telephone number	+44 20 3319 5448 +44 20 8681 5421
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Homepage address	www.icsfs.com

Gresham is a leading software and services company that specialises in providing real-time solutions for data integrity and control, banking integration, payments and cash management. Listed on the main market of the London Stock Exchange (GHT.L) and headquartered in the City of London, its customers include some of the world's largest financial institutions and corporates, all of whom are served locally from offices located in Europe, North America and Asia Pacific. Gresham's award-winning Clareti software platform is a highly flexible and scalable platform, available on-site or in the cloud, designed to address today's most challenging financial control, risk management, data governance and regulatory compliance problems.

COMPANY PROFILE	
Company type	Technology vendor
Annual turnover	£20M
Number of Customers Total	100+
Number of Employees	150
Inception	1972
Geographical coverage	North America, Europe, Asia Pacific

COMPANY CONTACT DETAILS	
Contact	Frank Glock
Job Title	EMEA Sales Director
Contact address	Aldermary House, 10-12 Queen Street, London, EC4N 1TX
Telephone number	+44 (0) 207 6530214
Email Address	fglock@greshamtech.com
Homepage address	www.greshamtech.com

NICE Actimize is the largest and broadest provider of financial crime, risk and compliance solutions for regional and global financial institutions, as well as government regulators. Consistently ranked as number one in the space, NICE Actimize experts apply innovative technology to protect institutions and safeguard consumers and investors assets by identifying financial crime, preventing fraud and providing regulatory compliance. The company provides real-time, cross-channel fraud prevention, anti-money laundering detection, and trading surveillance solutions that address such concerns as payment fraud, cyber crime, sanctions monitoring, market abuse, customer due diligence and insider trading.

COMPANY PROFILE	
Company type	Public Company
Annual turnover	Undisclosed
Number of Customers Total	over 100
Number of Employees	over 500
Inception	1999
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	Cindy Morgan-Olson
Job Title	Head of Global Public Relations/Analyst Relations
Contact address	221 River Street, Hoboken, NJ 07030, USA
Telephone number	866-999-NICE
Email Address	cindy.morgan-olson@niceactimize.com
Homepage address	www.niceactimize.com

Pendo Systems was established to provide a new standard in Investment Accounting System Delivery. At Pendo Systems, our mission is to be a premier provider of software solutions to global financial institutions. We strive to not only help our clients achieve their business objectives and goals, but also to contribute to the success of individuals, businesses and communities throughout the world. We are driven to work with our clients in a collaborative partnership, and are guided by the fundamental values of professionalism, respect, teamwork and quality in delivering products and services to our clients.

COMPANY PROFILE	
Company type	Sole proprietorship
Annual turnover	over $5M
Number of Customers Total	20+ top tier banks worldwide
Number of Employees	over 10
Inception	2006
Geographical coverage	North America

COMPANY CONTACT DETAILS	
Contact	Pamela Pecs Cytron
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Contact address	102 Clinton Avenue, Montclair, NJ 07042, USA
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Email Address	pamela@pendosystems.com
Homepage address	www.pendosystems.com

Paybase is an end-to-end payments platform that has achieved industry recognition for revolutionising the world of finance. In an industry fraught with legacy technology and legacy thinking, businesses needing to facilitate payments between multiple parties often have to work around payments, restricting their ability to build innovative, user-friendly products.

Paybase changes this, offering businesses a truly flexible payment system that suits their needs and matches payment experience to user experience. This makes Paybase perfect for marketplaces, gig/sharing economy platforms and products with complex payment requirements.

COMPANY PROFILE	
Company type	Private Limited Company
Annual turnover	Undisclosed
Number of Customers Total	Undisclosed
Number of Employees	20
Inception	2016
Geographical coverage	UK

COMPANY CONTACT DETAILS	
Contact	Russell West
Job Title	Head of Partnerships
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Telephone number	+447762192746
Email	russell@paybase.io
Homepage address	www.paybase.io

Red Hat is the world's leading provider of enterprise open source solutions, using a community-powered approach to deliver high-performing Linux, cloud, container, and Kubernetes technologies. We hire creative, passionate people who are ready to contribute their ideas, help solve complex problems, and make an impact. Opportunities are open. Join us.

COMPANY PROFILE	
Company type	Public Company
Annual turnover	Undisclosed
Number of Customers Total	Undisclosed
Number of Employees	10,001+
Inception	1993
Geographical coverage	Global

COMPANY CONTACT DETAILS	
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Escrow's potential in the platform economy
How modern payments providers can optimise the instrument
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