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Financial IT

Innovations in FinTech

HOW THE FINANCIAL SECTOR CAN PREPARE FOR THE NEW ERA OF RESILIENCE

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Vice President, Financial Services,
Red Hat

THE FUTURE OF DIGITAL PAYMENTS

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Volante Technologies

IN THE MIDST OF CRISIS LIES GREAT OPPORTUNITY

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WHEN GOVERNMENTS ACT IN 2022…

… WHAT ARE THE MOST IMPORTANT THINGS TO LOOK FOR BY THE END OF 2023?

Andrew Hutchings,
Editor-In-Chief, Financial IT

Financial IT receives contributed articles that, almost invariably, are forward-looking. The contributions identify the trends that apply in technology generally, cybersecurity, payments, and so on. These trends give rise to specific issues or problems, which the organisation that is contributing the article is well placed to address.

The overall message is a positive one. Protagonists in the private sector are working at the intersection of IT and financial services to produce better outcomes for customers, shareholders and other stakeholders.

What makes this edition of Financial IT unusual is that four of the articles address situations where initiatives are being taken by governments (and/or their agencies). Moreover, in each of these cases, there are very specific outcomes to look for in the next 12 months.

The European Union (EU)

In the EU, for instance, the Digital Operational Reliance Act (DORA) is likely to be passed prior to the end of this year. DORA will probably come into force in 2024 and applies to all financial institutions - ranging from established banks and insurance companies through to crypto-currency exchanges and crowdfunding platforms. It also applies to third-party providers of information and communication technologies: in other words, DORA's ambit reaches major cloud providers such as Google, Amazon and Microsoft.

As Red Hat's Richard Harmon notes in this edition of Financial IT:

"With the new regulation, the EU is reacting to the increasing digitisation of the financial world and the associated rising security risks, especially with regard to the outsourcing of IT services to "offshore" partners or the use of cloud offerings. Digital operational resilience is crucial here in terms of mitigating IT risks – not least from an economic perspective. While it is not easy to estimate the costs caused by operational incidents, industry research suggests a figure of between €2 billion and €27 billion per year for the EU financial sector."

A key worry is cloud concentration risk. What would happen to particular financial institutions - or the entire financial system - if a single major cloud provider suffered a major disruption, whether for technological or financial reasons.

By late 2023, watch for:

Clear evidence of significantly greater usage of hybrid cloud solutions by all kinds of financial organisations, (in the EU and elsewhere) as managements respond to DORA.

The Kingdom of Saudi Arabia

As a part of its Vision 2030 program of transitioning to a post-oil age, the Saudi government launched the Saudi Data and Artificial Intelligence Authority (SDAIA) and two related organisations in late 2019. As is noted in this edition of Financial IT:

"In its first year of activity, SDAIA had: established a national databank, consolidating 80 different government databanks, accounting for 30% of the digital assets of the Saudi government; started building the G-Cloud, with the eventual aim of handling data from more than 40 government bodies; and using AI to identify opportunities for US$10 billion

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Sabrina Akramova,
Managing Editor, Financial IT

in new revenues or cost savings for the government, 'developing an ambitious and innovative data and AI strategy' for the country".

However, the scope of SDAIA goes far beyond boosting the efficiency of the Saudi government.

By late 2023, watch for:

Increased numbers of young Saudis training and working as data scientists/coders; evidence that AI is being used by private sector organisations, and not just state-owned enterprises such as Saudi Aramco; high profile deals that give SDAIA and other protagonists control of intellectual property associated with AI.

The United States Virgin Islands (USVI)

It seems that many business that are linked to global supply chains are looking to nearshore (i.e. work with suppliers of goods and services that are geographically much closer than they were in, say, 2019).

Think-tank SEDI-CASE, which promotes the island of St. Croix, argues in this edition of Financial IT, that the USVI are ideally placed to benefit from this trend.

The USVI combines three key advantages: its geographical proximity to markets in the Americas and Western Europe; its status as an unincorporated territory of the United States; and the scale of its fibre-optic cable networks.

By late 2023, watch for:

Substantial new investment in the USVI as international businesses look to nearshore and to reduce the risks associated with their supply chains.

The World

In his Publisher's Letter, Chris Principe considers the good and evil aspects of Central Bank Digital Currencies (CBDCs), the introduction of which is being considered many by governments and central banks around the world.

By late 2023, watch for:

Actual usage of CBDCs in one or more OECD countries and in one or more large emerging markets; and/or massive discussion in the mainstream media about the pitfalls of CBDCs.

Once again, we thank all subscribers and contributors. We wish all of you the best for the festive season and the New Year.

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CBDCs But WHY?

Central Bank Digital Currencies (CBDC) are being researched by central banks and governments of 87 countries and has already been launched in 11 countries.

The key question is: But WHY?

What follows is my view of the good, and the evil of CBDCs.

CBDCs: the GOOD

For you and for other people, the good things bought by CBDCs include ease, speed, and safety.

Everything – including savings, investments, debits, and credit lines – will be on your phone. There will be no need to use an ATM, or credit cards or have cash.

Your transactions will be instantaneous and will be done very safely. There will be no checks to clear or cash to deposit: all money movement will be digital. You can see your financial life accurately, anytime, and anywhere.

Your protection will be complete. You will have no fear about carrying cash, no risk of identity theft, nor of loss of your credit/debit card numbers. We will be free of the loss of money due to theft. Banks will monitor digital transaction trails. Life will be tougher for criminals.

Governments are about power, so it is easy to understand the appeal of CBDCs.

No longer will the governments have the huge expense of producing bank notes and coinage. There will be no cost associated with the secure movement and storage of money. The art of counterfeiting and break-ins to steal, will become ancient history. Lawbreakers will lose access to using cash and money laundering will no longer be needed.

Governments will have greater oversight. They will be able to require banks to reveal all transactional information on customers beyond what is done today. Taxes, personal and corporate, will become quarterly direct debits and income tax evasion eliminated. With the biggest reduction of crime in history, occupancy of many jails will be reduced. This move to CBDCs will bring a flood of funds to every country's treasury.

Bankers, I believe, are eager for CBDCs. There will be huge cost savings, smaller staffing, and a reduction in losses from crime and fraud. There will no longer be the need for the banks to be the distributors of physical money. Bricks and mortar banks will be out, no retail floor needed. Centres with computers will be (to a greater extent than today) in. Customer service will be handled – almost entirely – remotely.

Banks may offer safety deposit boxes: they will not need vaults. Even the smallest transaction will pass through the banks digitally – providing the opportunity for fees and indirect income.

This will make reporting to the government's agencies quicker and simpler. Customers will not have any alternative to dealing with banks.

CBDCs: the EVIL

While all the benefits for people, governments, and banks sound good for each group. The overall balance of benefits favours governments and banks. Yes, they will spin CBDCs to people as bringing a new and wonderful world.

Chris Principe,
Publisher, Financial IT

The truth is different. Many of us will see crypto as an alternative and move towards greater usage. If cryptos are the solution to bypassing CBDCs, then expect to see the governments outlawing cryptos.

Worse, banks could put a hold or freeze or close the accounts of those suspected of using cryptos. Governments and banks want to increase their dominance over financial transactions. All of this would be done – ostensibly – with our best interests and our protection in mind.

In the end, you will have to make a tough choice. On one hand, you can accept that your daily financial life is over unless you use CBDCs. Alternatively, you can decide to operate entirely in the crypto world. The challenge with the latter is that a lot of shops and other sellers of goods and services may not accept payment in cryptos if that risks their losing their bank accounts.

CBDCs have the potential to change so much of our lives and may even change the definition of who is a free person. CBDCs enable governments to control our financial lives through the banks. Governments could disallow you the purchase of travel, or the buying of certain goods or services, or the dealings with particular merchants. It may be that no laws have been broken, but merely that you have displeased the government.

CBDCs give governments and banks the ability to centralise power once again – very rapidly and totally. They will control people like never before in history. Financial slavery will be the new order. What's your WHY?

“I WOULDN’T WORRY ABOUT THIS VIDEO STREAMING SERVICE THING.”

– Former Executive,
video rental chain

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Rachel Hunt,
Vice-President of Strategy & Growth,
Volante Technologies

IN THE MIDST OF CRISIS LIES GREAT OPPORTUNITY

Financial IT: Could you briefly describe Volante Technologies and say a little about the company's history?

Rachel Hunt: Volante Technologies was founded just over 20 years ago. Originally, we assisted large banks with the transformation of complex financial messages. Our low-code solution made it possible for these banks to integrate all payments messages, regardless of the rails through which the messages traveled. Through transformation and automation, we enabled financial institutions to accelerate their digital transformation.

Over time, we could see the opportunities from cloud and developed the Volante Payments as a Service (PaaS) platform – a cloud and API-native enterprise application with low-code at the heart of it, designed for end-to-end processing. As we had done with our low-code platform, we introduced our payment application to tier-one banks; we did the first RTP payment with BNY Mellon and processed the first-ever instant payment in Saudi Arabia, and supported the first-ever cloud-based payment services ecosystem deployed within the MENA region.

Our payments processing piece is unique. It is built with non-functional requirements designed for large institutions; it's secure, it's cloud-native, and it's API driven. This modern architecture allows us to offer a resilient, fully scalable platform, to smaller banks as Software as a Service (SaaS).

Today, we have over 125 customers in more than 35 countries around the world, and our solutions and services process millions of transactions and trillions in value every day. Customers include banks, other financial institutions, clearing houses, providers of market infrastructure, and card networks.

Financial IT: What do you see as your competitive edge?

Rachel Hunt: Our low-code platform is the cornerstone of everything we do, allowing our payments solution to deliver on time to market and innovation. Another competitive differentiator is that we are a single unified payments platform for any account-to-account payments. And that's important, because of the convergence that is happening across the different payment types. When businesses are siloed it's not possible to innovate across them. Additionally, when a firm looked to replace a payment application, that firm had to go 'big bang'. We integrate with an institution's existing technology deck – whether it's homegrown or a

Volante Technologies is the leading global provider of cloud payments and financial messaging solutions to accelerate digital transformation. It serves as a trusted partner to over 125 banks, financial institutions, market infrastructures, clearing houses, and corporate treasuries in 35 countries. Our solutions and services process millions of transactions and trillions in value every day, powering four of the top five corporate banks, 40% of all US commercial bank deposits, and 70% of worldwide card traffic.

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FREEDOM TO EVOLVE

40-year-old legacy system – because we are microservice-based. Firms can start their journey with one rail, or even just the pre-processing part, and then grow with us as their requirements change.

Financial IT: Your website says that you “wow” your customers and that you enable your partners to differentiate themselves from their competitors. What does this mean in practice?

Rachel Hunt: We help our clients to do more, and to be more flexible. In February this year, we extended our relationship with FIMBank, a Malta-based provider of trade finance, factoring and forfaiting solutions. Previously, FIMBank had been working with Volante to process inbound and outbound corporate payments. Now the bank is using additional components from the Volante PaaS platform in order to facilitate clearing and settlement through the Central Bank of Malta. It is now easier for FIMBank to take part in new schemes such as SEPA Instant, to make its migration to ISO 20022, and to improve the customer experience of its corporate clients on a 24/7 basis.

Financial IT: Volante sees itself as a strategic collaborator with its clients and partners. Can you illustrate what this means in real life?

Rachel Hunt: In May this year, we began a digital transformation collaboration with Mexico’s Banco del Bajío (BanBajío). Our collaboration is ambitious, and one that should boost financial inclusion in Mexico. BanBajío has developed proprietary solutions and partnered with leading technology companies to offer the best experience to its customers. It should be noted that the clients are diverse – ranging from individuals through to small and medium-sized enterprises (SMEs) to corporations and government agencies.

Working with Volante, BanBajío has been able to achieve remarkable growth. As of February 2022, the number of monthly active users of its digital channels increased by 51 percent year-on-year; and the volume of transactions processed through its digital channels grew by 33 percent year-to-date, significantly higher than the global average of 10 percent.

Using PaaS APIs, the bank was able to orchestrate and process an increasing number of payments more efficiently. Indeed, the bank achieved a tenfold improvement in processing speed. Portal services such as digital payroll or bulk transfer are now processed quickly and securely – regardless of the amount of data involved.

Financial IT: Do you also work with institutional banks?

Rachel Hunt: Absolutely. We worked with Goldman Sachs Bank USA to develop the technology that underpins the bank’s new digital transaction banking platform. That platform is very unusual in that it has been built from scratch and is entirely in the cloud.

The Goldman Sachs Transaction Banking Platform is designed to be easy for the bank’s corporate clients to use. Features include APIs, payments, virtual accounts, liquidity management, and analytics all underpinned by Volante’s cloud-native payments. The platform is built around Volante’s cloud-native technology which can handle US dollar and foreign currency payments across many payment rails – including US wires, ACH and SWIFT.

Financial IT: 2022 has been a most unusual year for global financial markets. Equities have fallen sharply in price. Bonds have also fallen sharply. The US dollar has soared. Inflation has reared its ugly head again. Many central banks have hiked official rates very quickly. Has all this had an impact on Volante or your clients?

Rachel Hunt: The extraordinary events of the past few years – economic, financial and geopolitical – have been difficult for many of our clients and businesses. However, the challenges have brought greater realization that much of the work – and headaches – involved with keeping up with the broader payments industry can be resolved with trusted partners specialized in delivering speed and technology that future-proofs. This leaves banks to focus on their core business and on delivering the best customer experience (CX) to their own clients – such as delivering better visibility and a best-in-class payments provision to customers. Any crisis presents our clients with opportunities to transform. We help our clients to seize those opportunities.

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– Former Chief R&D Officer,
camera company

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Dr. Richard L. Harmon,
Vice President, Financial Services,
Red Hat

Dr. Harmon is the global head of Financial Services at Red Hat. He joined Red Hat in December, 2020 and has over 25 years of experience in Capital Markets with specializations in Risk Management, Advance Analytics, Fixed Income Research and Simulation Analysis.

Prior to Red Hat, Dr. Harmon was Managing Director of Financial Services at Cloudera for 5 years and has held senior positions at Citibank, Bankers Trust, JP Morgan, BlackRock, Bank of America/Countrywide Capital Markets, First American Core Logic and at SAP.

Dr. Harmon holds a PhD in Economics with specialization in Econometrics from Georgetown University.

HOW THE FINANCIAL SECTOR CAN PREPARE FOR THE NEW ERA OF RESILIENCE

Digital risk management is becoming increasingly important in an era of growing cloud usage in the financial industry. New regulations such as DORA point the way for institutions to improve security and resilience. An industry-wide strategy is helpful for implementing the requirements. In particular, the advantages of hybrid cloud models should be taken into account.

The integrity and resilience of banks and financial systems have been a key issue for governments and regulators since the global financial crisis of 2008. In the process, compliance requirements are continuously being tightened. In the EU, DORA (Digital Operational Resilience Act) is a current example of this. The new regulation is expected to be passed in 2022 and come into force in 2024 at the latest. It obliges financial companies to ensure the resilience of all technologies used and the operational stability of digital systems. This means that all players in the financial sector must take adequate measures to improve their resilience to all types of disruptions and threats affecting their information and communication technologies. The new DORA framework does not only affect large banks but applies to all types of financial companies, from credit and payment providers to investment and insurance companies, cryptocurrency exchanges and crowdfunding platforms.

DORA aims to strengthen the digital operational resilience of financial institutions. It also covers the regulation and supervision of all third-party providers of information and communication technologies that provide services to the financial services sector. This therefore also includes large cloud providers such as Microsoft, Amazon or Google.

With the new regulation, the EU is reacting to the increasing digitisation of the financial world and the associated rising security risks, especially with regard to the outsourcing of IT services to "offshore" partners or the use of cloud offerings. Digital operational resilience is crucial here in terms of mitigating IT risks – not least from an economic perspective. While it is not easy to estimate the costs caused by operational incidents, industry research suggests a figure of between €2 billion and €27 billion per year for the EU financial sector[1].

A key focus for regulators is cloud concentration risk. That is, the systemic risk associated with outsourcing common business-critical functions such as payments or clearing to a single cloud provider. The spillover impact of a disruption or vulnerability occurring with such a provider could be significant if multiple financial institutions are reliant on that service without sufficient redundancy.

Regulators in other parts of the world are also following the DORA example in terms of content. In the UK, for example, the Bank of England intends to assess the resilience of cloud hyperscalers. The US Federal Reserve, Congress and other US policymakers are looking at whether regulators are adequately equipped to deal with cloud risks. And in Singapore, Hong Kong and Australia, banks are required to conduct varying degrees of due diligence on technology partners to demonstrate that they have sufficient safeguards and response plans in place in the event of a disruption.

Increasing security risks

DORA – and whatever else may follow – comes at a time when many institutions are increasing the complexity and therefore the risk of their technology supply chain. The undeniable benefits of the cloud will likely lead to more business-critical workloads being moved to the cloud. Inevitably, this will require a greater focus on security. Financial institutions can look for new service partners to provide solutions to protect their core systems. In parallel, existing partners who modernise legacy platforms and applications and drive digital innovation must also focus more on security aspects.

The result of increased cloud usage is a hyper-connected financial sector and a larger and potentially more vulnerable attack surface for institutions. Increasingly, they are accessing a wide range of third-party data and services through the same public cloud servers and data centres. If just one organisation is vulnerable, it can affect others. In 2021, for example, the Federal Reserve modelled via simulations how a cyberattack could affect the US financial system[2]. In doing so, the US central bank estimated that the impairment of one of the five most active US banks would likely lead to significant spillover effects on other banks, with an average of 38 per cent of the national financial network being affected. If banks respond to the uncertainty by hoarding liquidity, the potential impact in terms of missed payment activity is dramatic. It could reach more than 2.5 times daily GDP.

Overall, financial institutions are exposed to ever greater cyber risks. Consequently, the number of security incidents in the global financial sector is also increasing. For example, around 600 security incidents were reported to the German Financial Supervisory Authority BaFin between 2018 and 2020. And the European Central Bank (ECB) registered a 54 percent increase in cyberattacks on institutions in the eurozone in 2020 compared to the previous year[3]. There is a great danger that these numbers will continue to rise. Thus, at the end of 2021, the new head of BaFin, Mark Branson, also stated: "This risk is very present and it is growing strongly. I'm personally not sure that all of us together – government sector, private sector – are well enough prepared for a really serious security incident"[4].

BaFin is working intensively on cyber risks and is also increasingly conducting dedicated IT audits at institutions. If a need for action is identified, it continuously adapts existing regulations. For example, in a circular dated March 2022, BaFin also specified the requirements for the reporting obligations of payment service providers in the event of operational and security incidents. The "breach of security of network and information systems" was introduced as a new assessment criterion, which can also lead to the classification of a serious security incident with a reporting obligation[5].

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1 *Source: Deutsche Bundesbank: https://www.bundesbank.de/en/press/speeches/exploring-dora-the-digital-operational-resilience-act-and-its-impact-on-banks-and-their-supervisors-876006*
2 *Source: https://www.newyorkfed.org/research/staff_reports/sr909*
3 *Source: https://www.bankingsupervision.europa.eu/press/publications/newsletter/2021/html/ssm.nl210818_3.en.html*
4 *Source: https://www.handelsblatt.com/finanzen/banken-versicherungen/banken/internetkriminalitaet-bafin-chef-branson-warnt-vor-cyber-und-geldwae-scherisiken/27801876.html*
4 *Source: https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Rundschreiben/2022/rs_03_2022_schwerwiegender_Zahlungssicherheitsvorfaelle.html*

Provides flexibility to customize solutions to meet my company's needs

Ensures my organization has access to the latest innovations

Has been instrumental in my organization's ability to take advantage of hybrid cloud architectures

Simplifies the process of adopting a hybrid cloud infrastructure

Is a key part of my organization's security strategy

High security as an industry task

The minimisation of IT and cyber risks as well as the increase of resilience must therefore continue to be a high priority in the financial world. In view of increasingly sophisticated attack scenarios, a stronger community-oriented approach should be taken to avert danger. Resilience and security must become a team effort, as financial systems no longer exist in isolation. When institutions leave their "secrecy strategy", a holistic view can be taken of how everything is connected. All organisations and companies in the ecosystem can then benefit from this. A unified, transparent solution, as has become accepted in SecOps practice, must also be the goal for the entire financial services sector. If this is accepted, the logical next steps are an industry-wide strategy, common selection, procurement and deployment of shared solutions, and coordinated attack prevention and remediation teams and processes.

There are efforts in industry and academia to map how the global financial sector is technologically connected using simulations to determine how a system failure or attack could impact not just a few firms but spillover to the markets. For example, I co-authored an academic paper published in the Journal of Financial Compliance in 2021 that builds a framework to model the banking system, their respective cloud deployments and what workloads reside in these(6). The goal is to understand which types of critical financial infrastructure and applications are most affected by a bank's cloud deployment strategy. This also involves identifying potential gateways that could lead to systemic risks and quantifying the impact of security incidents on the overall economy. Regulators, financial institutions and cloud providers alike can benefit from these insights. Ultimately, it is the same modelling principles that help virologists predict the path of Covid-19.

Open source and hybrid cloud as resilience accelerators

But a crucial challenge now is how financial institutions can build resilience when using cloud services. A growing number of companies are pursuing an open source and hybrid cloud strategy. The 2022 survey "The State of Enterprise Open Source" by Red Hat has shown that 81 percent of the IT executives surveyed from the financial world would rather rely on open source solution providers(7). For 75 percent, the decisive advantage is that open source software simplifies the process of introducing a hybrid cloud infrastructure. And according to Red Hat's 2022 Global Tech Outlook Report, hybrid cloud is becoming the most widely used cloud strategy. 30 percent of the more than 1,300 IT executives surveyed rely on a hybrid cloud strategy and 13 percent on a multi-cloud approach, meaning the use of multiple public cloud providers (8). An open hybrid cloud strategy offers the flexibility to run and scale applications consistently across environments – from bare metal to virtual machines (VMs), edge computing, private cloud, and multiple public clouds – without having to rebuild applications, retrain people, or maintain disparate environments.

An open hybrid cloud architecture supported by an enterprise-grade container platform are thus key components to drive the development and deployment of innovative applications. At the same time, they provide the necessary standards and features to improve the security footprint of multiple cloud environments while maintaining application portability. This also allows financial institutions to retain flexibility in choosing future cloud options. In general, the trend towards using hybrid cloud offerings will contribute to stronger security and resilience capabilities.

Overall, the main task is thus to make resilience and innovation partners rather than adversaries. Financial institutions should take a truly holistic approach, where security is built into the DNA of the ecosystem and not added as an afterthought.

Compact

DORA puts a stronger focus on information and communication technology and digital risk management.

Efficient security in the financial world requires a uniform, industry-wide strategy.

Open source solutions and hybrid cloud models support on the path to operational resilience.

[6] *Source: https://www.ingentaconnect.com/content/hsp/jfc/2021/00000004/00000003/art00005*
[7] *Source: https://www.redhat.com/en/resources/state-of-enterprise-open-source-report-2022*
[8] *Source: https://www.redhat.com/en/global-tech-outlook-report/2022*

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Adam Vissing,
VP Sales & Business
Development,
IXOPAY

THE FUTURE OF DIGITAL PAYMENTS

The payments landscape has changed radically over recent years, with Covid-19 driving digital acceleration, changing consumer behavior and reshaping how retailers do business. In this article, we look at emerging trends and how merchants can meet the challenges of the future.

The Rise of Alternative Payment Methods

The number of alternative payment methods competing with traditional methods like credit cards continues to rise. Digital wallets, cryptocurrencies, open banking and mobile payments have changed the payment landscape, with consumer preferences differing strongly by region.

Payment service providers (PSPs) typically only focus on a limited number of countries and payment methods. Merchants that need to cater to the preferences of different markets therefore need to rely on multiple PSPs. This results in additional implementation and maintenance overheads, which drives demand for solutions that unify multiple PSPs under a single API. These flexible payment orchestration solutions make it easier to integrate new payment methods as demand emerges.

The New Market is Global

The rise of digital commerce makes it possible to sell directly to a global audience, while multinationals need to operate in a wide variety of markets. This necessitates processing payments from around the world. However, the payments market is heavily fragmented, much of this down to differences in legislation between jurisdictions. Keeping up with evolving regulations across all markets is an unrealistic proposition for even the largest providers, who instead concentrate on a core market. While some consolidation can be expected in the future, this geographic fragmentation will undoubtedly continue due to the legal complexity involved.

Coupled with regional preferences for different payment methods, and the fact that local providers typically offer more attractive rates, this again results in merchants relying on multiple PSPs and is further accelerating demand for payment orchestration.

Payments: A Volatile Market

The payments market is highly volatile and the lifespan of the average PSP or orchestration platform is short. Acquisitions are frequent, and not all companies are able to turn a profit, incentivizing investors to sell unprofitable businesses. For more established PSPs, acquiring existing merchant portfolios is an attractive proposition. This means a constantly shifting market, with providers frequently changing hands or going out of business.

Merchants therefore face significant risks if they are reliant on a sole payment provider. If their PSP is acquired, the new owner may look to shed merchants operating in specific verticals or with low transaction volumes. If a PSP goes out of business, this can leave merchants completely unable to process payments. The Wirecard scandal is a case in point, underscoring just how important it is to have fallback options in place. Companies that had been fully reliant on Wirecard for payment processing suddenly needed to find a replacement service overnight, with many turning to payment orchestration platforms such as IXOPAY to avoid a repeat.

Merchants can mitigate these risks by diversifying their payment portfolio with multiple PSPs and by including fallback options. The potential economic cost of not being able to do business will continue to drive these developments.

Digital Acceleration

Covid-19 was a huge driver for digital payments. Online business boomed and the transition to cashless payments accelerated as consumers changed their shopping habits. Traditional brick and mortar merchants who were unprepared for the transition to online or hybrid sales models scrambled to meet these new demands. In some cases, merchants were forced to pivot to an entirely different model within a short space of time.

This rapid shift in consumer behavior underlines the importance of flexibility for traditional brick and mortar stores. The economic cost of being unable to do business has served as a wake-up call, and the coming years will see more and more traditional businesses embrace digital payments.

Unbundling: Technical Implementation vs Transfer of Funds

Payment orchestration is gaining ground, with many traditional PSPs co-opting the term and RFPs initiated by merchants specifically requesting payment orchestration solutions. At its heart, payment orchestration represents the unbundling of the technical implementation of payments from the actual transfer of funds.

Leading payment orchestration platforms like IXOPAY provide merchants with a single API that integrates any number of PSPs. Cascading features make it easy to provide fallback options or switch between PSPs on an ad-hoc basis. This gives merchants a higher degree of flexibility, mitigates many of the risks of relying on a single PSP and eliminates the overheads of maintaining PSP integrations. As enterprises look to future-proof their payments ecosystem, this trend will only accelerate. PSPs will continue to play an important role in the actual movement of funds, while merchants can pick and choose from the PSPs that best cater to the markets the merchant operates in.

Common themes we can identify in the above is a trend towards flexibility, improved user experience and better risk management. Single points of failure are particularly risky, and Covid-19 and the Wirecard scandal aptly demonstrated how entire markets can be disrupted overnight. Mitigating these risks requires strong and reliable partnerships with suitable fallback options, and building up a robust network will be key to operating in an increasingly digital world.

Ruben Salazar Genovez,
Global Head,
Visa Direct

THE NEXT FRONTIER IN GLOBAL MONEY MOVEMENT IN 2023 AND BEYOND: CREATOR COMMERCE, DIGITIZED REMITTANCES AND DIGITAL WALLET ADOPTION

At Visa Direct, we are observing several trends that will continue to influence the development of more real time payments solutions. Around the world there are 50 million artists, musicians and creators publishing content as a full- or part-time source of income. For this creator economy, a lot of it is so virally driven that getting paid and having access to funds as soon as possible, enables creators to really capitalize on the momentum. By creating payment tools engineered to accept everything from social media micropayments to royalties, for example, we can support this new wave of commerce.

As I look back on 2022 with an eye toward innovation and advancing equity, I'm proud of the progress being made and look forward to carrying into the new year the momentum we've seen in simplifying money transfer capabilities in ways that can benefit everyone, everywhere.

There are countless stories like mine that reverberate worldwide. As global payment services become increasingly digital, there's a pressing need to help agricultural workers in small villages and young professionals in urban centers send money to family overseas in an easy and streamlined way. According to 2019 data from the UN, 800 million people receive such remittances today from family members who have migrated for work.

I expect demand for digital remittances to increase in a post-pandemic world. A recent U.S. Visa study found that almost a quarter (23%) of surveyed U.S. adults have sent money from the U.S. to another country already, and 15% of total U.S. adults surveyed plan to send money to another country within the next year.

Mobile wallet innovation simplifies money transfer capabilities

For the unbanked individuals in emerging markets, mobile wallets are gaining traction as an empowering first entry point into the financial system. Consumers are not required to have a card or account to load or receive funds directly to their digital wallet, opening the potential for greater financial inclusion and enabling underserved populations opportunities to access financial products that meaningfully impact how they live and work.

Large financial institutions, governments, neobanks, and money transfer operators are all looking for send-to-wallet solutions to expand financial access for consumers and small businesses in developing regions. According to a recent analysis, wallet users are projected to exceed 5.2 billion globally in 2026 – up from 3.4 billion today.

We expect that number to continue to grow as consumers get more comfortable storing their financial information and handling payment needs through their smartphones. Digitally native consumers – Millennials and Gen Z – tend to embrace wallets and are driving the shift away from traditional money transfer capability practices offered by banks.

There are continued signs that digital wallet ownership is gaining traction amongst consumers and SMBs in some of the most populated and large inbound remittance markets such as China, India, Mexico, Philippines, Kenya, and Bangladesh. Cross-border transfers sent and received via mobile wallets grew by 48% in 2021, reaching $16 billion.

The changing landscape for P2P and cross-border payments

By partnering with innovative fintechs like Thunes, Visa is extending the reach of Visa Direct – Visa's real-time payments network for business and person-to-person (P2P) payments – to now help provide access to nearly 7 billion cards, accounts and digital wallets combined, across more than 190 geographies,

Rather than filling out telegraphic transfer forms at a bank branch and waiting for days to confirm that the money was sent, sending directly to cards or using digital wallet transfers is quick, and payments are more convenient for customers.

There is a huge opportunity in the next few years to build on the progress made in digitizing remittances, which has proven to be a lifeline for the families of migrant workers receiving money.

VISA

Ruben Salazar Genovez is the Global Head of Visa Direct, a real-time push payments platform and one of the fastest growing products within the Visa portfolio. In his current role, Ruben is responsible for expanding Visa's global money movement capabilities beyond the card for Visa Direct. He also leads Yellowpepper, part of the Visa Direct portfolio of solutions that helps facilitate global money movement.

Prior to this role, Ruben was Senior Vice President of Products, Processing & Innovation for Visa Latin America & the Caribbean, where he headed Visa's portfolio of core products, digital platforms, and innovation centers in the region. During his tenure in this position, he helped transform the way Visa designs and deploys payments innovation throughout the LAC region. Prior to that role, he served as Head of Product Design & Development for Visa Asia Pacific (Singapore) where he was responsible for the integration of new digital capabilities with core payments platforms. He led the delivery of a pipeline of product enhancements, go-to-market plans, segment solutions and consumer experiences to support issuers and partners in securing revenue growth.

Ruben launched his financial services career at Citigroup, Latin America, where for almost 10 years he held various positions including card business management, business development for the Diners Club franchise, partnership and alliances, cobrands, marketing and general management. He also spent three years at Barclays – Barclaycard Iberia, where he was instrumental in managing business development, leading M&A initiatives, and reshaping the card business during the Western Europe economy downturn. He also completed a stint with Asia Pacific Middle East & Africa for Mastercard Worldwide, where he was responsible for consumer credit products.

Ruben currently serves as an Advisory Board Member for Florida International University's (FIU) Chapman Graduate School of Business. His past board experience includes serving on the Board of Directors for several organizations, including the Miami chapter of UNA-USA Young Professionals for International Cooperation, ServiRed Sociedad Española de Medios de Pago, S.A, Novopayment Inc. and Yellowpepper. As a global technology leader with several patents under his belt, Ruben is continuously looking for opportunities to leverage innovative assets in the architecture of new payment solutions to introduce easier-than-cash products. Ruben holds an MBA from Florida International University. He is also a graduate of Universidad Nueva San Salvador (El Salvador), as well as the University of New Mexico, from which he holds degrees in marketing & communications and journalism & mass media, respectively. Prior to his financial services career, Ruben was a broadcast journalist in El Salvador and served as mass media executive for the president's office of El Salvador.

Financial IT
Innovations in FinTech

FOUR WAYS CONSUMERS WILL EMBRACE EMBEDDED FINANCE NEXT YEAR

As the physical, digital and virtual worlds converge, younger generations of consumers are increasingly inhabiting new channels, such as social media and the metaverse, which is in turn creating the need for new ways to transact. As a result, businesses are integrating payments experiences and other financial services within new and emerging consumer touchpoints.

The invisible technology that makes this possible is embedded finance, which leverages APIs to give consumers access to banking, payments, insurance and other financial services directly within the apps and platforms they use every day. Embedded finance enables businesses to provide a faster and more intuitive experience for their customers, while simultaneously enabling them to expand their offerings and tap into new revenue streams.

FIS recently conducted a study into how the purchasing preferences of UK consumers is shifting as adoption of embedded financial services reaches mainstream usage.[1] The research identified four interesting ways in which consumers are likely to embrace embedded financial services in the next year.

1. *Shopping Seamlessly via Social Media*

Digital-native consumers get their inspiration from the influencers they follow on social media. Having grown up with almost everything available at the click of a button, they want and expect to be able to make purchases instantly via the channels they already inhabit.

According to FIS' research, 78% of Gen Z consumers (aged 18-24) said they are likely to purchase products and services through social media platforms in the next 12 months. Of those consumers, 62% are likely to buy clothing, shoes and accessories, 37% groceries, and 36% electronics.

The power of social media influence was also evident from the research, with around a quarter of Gen Z and Millennial (25–40-year-old) consumers feeling that social media encourages them to make more frequent purchases than they would otherwise.

As well as social media being a prime platform for brands to promote their products and services, it's also where they can embed a seamless end-to-end customer journey, right through to the transaction, without the consumer ever needing to leave the platform. The transaction may even include embedded lending options like buy now, pay later or embedded insurance, bringing everything conveniently to the consumer at their point of need.

2. *Embracing Convenience with Point-of-Sale Insurance*

To buy insurance at the point of sale when purchasing a TV, for example, or adding insurance to a plane ticket, many providers require consumers to fill out separate forms and take extra steps to complete the purchase. By leveraging embedded finance effectively, insurance offerings can be integrated directly into a single checkout experience, reducing friction for consumers who increasingly crave a fast and seamless interaction.

The FIS study showed that 27% of UK consumers believe they will add on insurance when purchasing something via a website or app within the next 12 months. This response was most common among Gen Z respondents, with 38% of this youngest age group saying they would add on insurance, followed closely by Millennials at 35%.

Insurers that choose to embed their products at the point of sale can expect to benefit from the halo effect of the retailer's brand, as well as access to a broad array of new customers who may not otherwise have even considered buying insurance.

3. *Moving Money in the Metaverse*

Despite some recent media scepticism, 43% of consumers said they are likely to access the metaverse in the next 12 months, making this an important emerging channel for businesses to explore as they look to cater to future consumer demands.

1 *Source: https://www.fisglobal.com/en-gb/about-us/media-room/press-release/2022/gen-z-message-to-merchants-meet-us-in-the-metaverse*

About Silvia Mensdorff-Pouilly:

Silvia Mensdorff-Pouilly, Senior Vice President of Banking & Payments in Europe, FIS.

Silvia has over 20 years of experience in payments and fintech across all areas of the value chain, from consumer payments to transaction banking. She is passionate about making payments and banking seamless and supporting customers, with an emphasis on leveraging innovation and bringing parties together. She has a deep understanding of the complex enterprise needs of banks, processors, central infrastructures, fintechs and other payment services, from fraud to immediate payments, PSD2 and open banking.

Silvia is a cofounder and advisory board member of European Women Payments Network.

Reflecting their propensity to explore and experience new digital channels, almost two thirds of Gen Z consumers (64%) say they are likely to access the metaverse in the next year. Of those who are willing to purchase products and services in the metaverse, 43% would buy event tickets, such as to a sports match or music concert, 40% would buy games or gaming tokens, and 31% would be open to purchasing banking services, including investments, insurance, and loans.

While the metaverse is a new realm of experience, play and commerce, it must also be an environment in which banking and payments are reimagined. The metaverse could enable a more tailored, personalised, and secure domain in which to deliver financial services for both the real and virtual worlds.

Payments and banking services need to exist as elements of every part of the metaverse, but they also need to be so seamlessly embedded that they become virtually invisible. The potential for transaction fees, exchange rate fees, wallet fees and premium services exists in the metaverse. But financial services providers can also think more creatively about how they integrate financial services into both the metaverse and real world, and the interchange between the two.

4. Expanding Choice through Embedded Loyalty

Consumers appreciate convenience when it comes to loyalty schemes, with 48% of FIS' survey respondents believing that collecting loyalty points digitally is more convenient than keeping physical loyalty cards in their wallet. But as well as being great for consumers, there are also huge advantages for retailers.

Merchants can greatly enhance customer loyalty and generate additional revenue with programs that directly link loyalty rewards to payment cards, allowing customers to make use of rewards instantly, stay engaged via push notifications when they transact, and incentivise further purchases.

There are now several brands exploring novel types of loyalty programs, such as using NFTs (non-fungible tokens) to provide a VIP loyalty experience. Ticketmaster, for example, recently announced the launch of its NFT-linked event tickets that can enable special experiences, loyalty rewards, and memorabilia for customers.[2]

Embedded finance is also enabling retailers to offer their customers the chance to spend their loyalty rewards in different ways, such as by converting points to charity donations directly via an app, as exemplified by the new MyMcDonald's Rewards program.[3] And there's huge potential for loyalty programs go even further with embedded finance, by allowing customers to invest their points in stocks and shares, or even convert them to cryptocurrency.

Whether it's accessing financial services online, via social media or in the metaverse, one thing is for sure; embedded finance is opening the door to brand new revenue streams and opportunities for insurers, financial services providers, and merchants to provide a more wholistic, friction-free, and value-added experience for their customers.

As digital native younger generations come of age and their spending power increases, there's a huge opportunity to embed a range of financial services in the platforms these consumers use every day.

The industry is moving quickly, but advanced technology already exists that can provide consumers with a much faster, smoother, and more intuitive user experience wherever they choose to spend their time and money.

FIS

[2] *Source: https://techcrunch.com/2022/08/31/ticketmaster-taps-the-flow-blockchain-to-let-event-organizers-issue-nfts-tied-to-tickets/*
[3] *Source: https://www.mcdonalds.com/gb/en-gb/good-to-know/in-our-restaurants/my-mcdonalds-app/rewards.html*

Vladimir Kuiantsev is the CEO and Managing Partner at Akurateco Payments Orchestration Company, founded in 2019. Since 2020 Vladimir has been leading the overall management of Akurateco, which delivers easily customizable PCI DSS certified white-label payment software to payment service providers and merchants worldwide.

THE ROLE OF PAYMENT ORCHESTRATION IN DIGITAL ACCELERATION FOR ONLINE MERCHANTS

Two years of pandemic-induced slowdown and a world economic crisis immediately following it have hit the world of business hard. And yet, it is as thriving as ever, with new payment providers coming on stage practically every day and the demand for new payment methods growing in leaps and bounds.

In 2022 alone, after the pandemic made both businesses and consumers switch to online, users spent around $28.611 trillion with digital payment methods. Moreover, by 2025, 7 in 10 smartphone owners will shop using peer-to-peer payment apps. With these payment habits and demands unveiling so fast, e-commerce entrepreneurs rush to implement and offer a diversified payment portfolio to their customers.

Or at least so they should!

And here is why.

Why offer a variety of payment options

1. More than two billion people globally prefer mobile payments, says Mobile Payments App Revenue and Usage Statistics (2022). As Generation Z reaches their payment capabilities and those consumers that were overly cautious about their data online give in to convenience over fear, e-commerce must be ready to accommodate their payment preferences or lose millions in missed sales.
2. Online transfers will reach a whopping $428 billion by 2025, Juniper reports. Used to paying in a single click, consumers that have tried online transfers once will be forever inclined to choose this payment method over traditional ones.
3. Following the uncertainty of the pandemic, consumers now prefer debit over credit cards. While the latter is still going strong, the former is on the rise, and that's another thing e-commerce businesses need to bear in mind.

These three are just an example of how diversified consumers' payment preferences are. Not offering one of these payment methods could be detrimental to your business as your TA will choose the convenience of another vendor if they don't see their preferred payment methods on the list of available ones at your store.

However, implementing every single one of these payment methods separately can be a challenge, too. And that is when payment orchestration platforms like [Akurateco] come into play.

Why e-commerce businesses should outsource payment management

1. ***Software solutions are getting (overly) technically complex.***
   With online fraud and data breaches being on the rise, payment providers have to be extra cautious with the software they develop. Thus, they introduce new layers of protection, including complex KYC processes and onboarding, expert anti-fraud modules, etc. These are all vital yet extremely complicated things you can easily outsource to an expert payment orchestration solution provider like Akurateco. They will implement and fine-tune the solution to your specific needs and offer you an unheard-of level of support, walking with you every step of the way and acting as your tech department whenever you need assistance.

2. ***Your business will need to offer an overwhelming variety of payment methods. And it comes at a cost.***
   QR, cryptocurrencies, P2P, e-wallets, credit and debit cards, and BNPL are just a fraction of the list of payment methods you will need to implement and maintain to meet your customers' expectations. Preferences for online transaction methods heavily depend on the location and demographics of the shoppers. So, the list of payment methods to offer here is endless. To handle all of these payment methods, back them, keep up with the reporting system and keep adding more payment methods, you need to hire an in-house team of payment experts. And that is one costly endeavor.

   Covering several full-time employees of this level will cost you an arm and a leg (and maybe even more).

   In the meantime, multi-acquirer payment orchestrators offer a full range of payment methods via one integration into the platform. For instance, Akurateco offers over 200+ integrated banks and payment providers worldwide.

3. ***Outsourcing can save you a ton of money.***
   Reports show that on the brink of yet another economic crisis, companies tend to outsource services to save money. And for a good reason: expanding their use of task-specialized remote teams and agencies can save them thousands of dollars. Payment orchestration is no exception here.

   While you get the experience of a whole tech team always at your service, not being responsible for their accommodation, office expenses, benefits, and other full-time employee bonuses, imagine how much you can save per year. Whether you are an early-stage startup or an established business, cost-saving on such a scale is impressive.

To help those who are new to payment orchestration, we have prepared a complete guide that will walk you through the main features of the platform: https://akurateco.com/blog/payment-orchestration-platform-full-guide

AKURATECO

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SET CUSTOMERS FREE FROM CARD READERS: THERE'S A BETTER WAY TO VERIFY ACCOUNT ACCESS AND TRANSFERS

Payment fraud has tripled[1] in the last decade. 'Card not present' (CNP) fraud is by far the most common method, since payment card credentials are a form of knowledge that can be stolen via phishing or man-in-the-middle (MITM) attacks.

As a result, and to comply with regulations such as PSD2 and SCA in Europe and the UK, you might be sending card readers to customers to confirm possession.

Yet bank card readers are far from an ideal solution – sending out individual pieces of hardware is costly, time-consuming, and complicates the user experience greatly. It also forces users to be responsible for their own security.

All this adds up to frustrated users, IT support costs, and a poor brand reputation. But there is a way to keep the high hardware-based security without the poor experience – it's in the mobile phone your users already use for their banking.

Strong security vs customer experience

Card readers have long been considered the highest-security method to verify transactions; sacrificing customer experience for the reliable security of the card chip reader.

But these handhelds are far from easy to use, requiring a shipping delay and for the customer to perform their own setup. Maintaining their own bank security device is intimidating and frustrating for many users – it also allows too much room for human error. Meanwhile, customer service teams absorb the costs and complexity of device maintenance, including issuing replacements, tech support, and solving usability issues.

As the world adapts to becoming all-digital, users expect their payments and transactions to feel easy. Tolerance for delays and UX friction has dropped dramatically. 68%[2] of consumers abandoned a financial app in the past year, an increase compared to 2020, and over 60%[3] have walked away from a transaction due to a frustrating authentication process.

Do card readers fit the bill for universal authentication?

Any security solution to be deployed across the entire customer base must meet a rigid set of requirements:

- Highly secure
- Easy to deploy
- Easy to use
- Easy to manage
- Cost-effective

This results in compromises. Card readers provide robust security, but they fail on all the other criteria:

- ***Highly secure?*** YES. Card readers use the cryptographic security of the chip in a payment card, which can't be compromised.
- ***Easy to deploy?*** NO. Shipping a physical card reader to each customer is a lengthy process, delaying customer access.
- ***Easy to use?*** NO. Customers have to physically manage and set up their own security device, which is inaccessible or intimidating for many.
- ***Easy to manage?*** NO. Troubleshooting technical difficulties

1 *Source: https://www.merchantsavvy.co.uk/payment-fraud-statistics/*
2 *Source: https://financialit.net/news/digital-identity/record-number-european-consumers-abandon-financial-applications-during*
3 *Source: https://mobileidworld.com/new-survey-finds-poor-authentication-practices-will-drive-customers-away-101206/*

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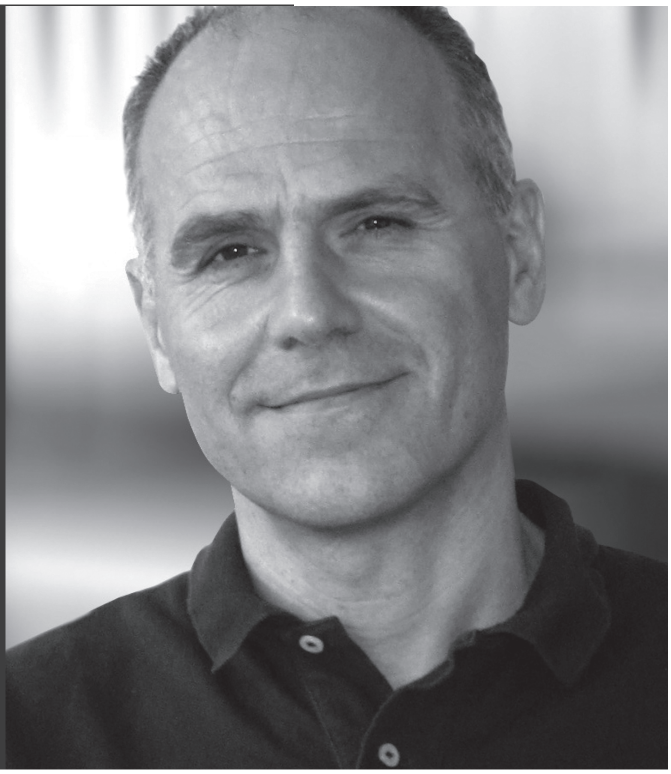
Paul McGuire, CEO-Founder, tru.ID:

Global mobile verification platform tru.ID is Paul's third venture, building on over 20 years of entrepreneurship in telecoms, mobile and financial services. Prior to tru.ID, Paul founded Paymo Inc which was acquired by Boku, where he became a Board member and ran worldwide business development. Prior to Paymo, Paul was co-founder and COO of mBlox, pioneers of mobile messaging, building a business active in over 50 countries that was acquired by Sinch. Paul's early career was at Booz, Allen & Hamilton. Paul holds an MBA from INSEAD and an Engineering degree from Cambridge University.



remotely and issuing replacement card readers consumes a significant amount of IAM effort and time.

- ***Cost-effective?*** NO. Shipping new and replacement card readers to every customer is prohibitively expensive.

Now, there's a new way to provide the same possession-factor security by using what customers already have on them – their mobile phone.

According to Insider Intelligence[4], 89% of people use mobile banking, including a whopping 97% of millennials. For many, mobile is becoming the default – sometimes the only – method for accessing their finances. Ideally authentication should take place all within the mobile banking experience, with no need for extra hardware or context switching. SIM security now makes that possible.

The modern, user-friendly way to prove possession

The SIM card acts as a secure possession factor, but with a unique advantage. Every customer already has one at all times, in their mobile phone – and they're very motivated to keep it safe.

SIM-based authentication is how mobile networks already verify their 6 billion customers every time they make calls or use data in order to charge them correctly.

No extra credentials are needed to 'log in' to a mobile network – authentication happens automatically in the background between the SIM card and the operator. SIM authentication is seamless to the user.

Now, tru.ID verification makes the same network authentication available to banks and FinTechs, solving all of the problems caused by card readers:

- ***Highly secure?*** YES. SIM cards use the same secure cryptographic technology as a credit card chip.
- ***Easy to deploy?*** YES. Your users already own this hardware – their smartphone. And with SIM auth available as an API in your app, access is instant, with no download required.
- ***Easy to use?*** YES. A simple, one-touch user experience that doesn't require extra any input except confirming the mobile phone number.
- ***Easy to manage?*** YES. SIM authentication can be integrated using OIDC, and the mobile number is a standard LDAP field.
- ***Cost-effective?*** YES. There are no costs for devices or shipping – simply pay for the verifications you need.

Ready to bring your customer experience into the 21st century?

SIM authentication is cryptographically secure, easy to implement and effortless to use. Unlike card readers and other hardware solutions, tru.ID SIM-based authentication combines security with usability, providing an ideal, cost-efficient solution to protect all your customers without additional hardware.

To find out how to replace costly card readers with high-security, low-friction authentication experiences for your customers, talk to tru.ID at https://tru.id/book-demo.

4 *Source: https://www.insiderintelligence.com/insights/mobile-banking-market-trends*

Julien Jenoudet,
Chief Executive Officer,
BoardiGO

SECURING AND STREAMLINING BOARD ADMINISTRATION WITH BOARDIGO

Financial IT: Please briefly describe your company's mission.

Julien Jenoudet: BoardiGO is a web and mobile tool that secures and streamlines the board administration process while maintaining compliance. BoardiGO is simple to use for board members and company secretaries, whether in online or hybrid mode. It saves time and adds security. There is a clear and complete audit trail. Its inbuilt electronic signature ensures the validity of votes and signings (being compliant with the eIDAS legislation of the European Union).

Financial IT: What product/service are you showcasing at Sibos 2022? What are the key features of the product?

Julien Jenoudet: We are showcasing the main BoardiGO product, which provides digital solutions to boards, enabling them to work with the highest levels of trust, digital security, and legal protection.

At Sibos 2022, we want to show how our app employs cutting-edge cryptography and other technologies. BoardiGO seeks to simplify, safeguard, and make transparent corporate governance for all stakeholders, board members, and corporate secretaries. This means that it can make the administration associated with governance more efficient.

We will be showing our built-in and customized templates, signature, and ability to handle any number of board members. There are special features that allow users to schedule a poll, synchronize external calendars, and request documents from members and external users. Additionally, we have developed integrated video conferencing tools for online and hybrid modalities.

Financial IT: How does BoardiGo help to keep track of the governance process?

Julien Jenoudet: All of our clients' data and workflows are stored in the European Union, either with Microsoft Azure or in a private cloud managed by us in Luxembourg. We maintain records for five years. By using our search engine, users can get documents and workflows and export their search results to an .xls file. They are able to "tag" the businesses they are managing based on the contract or customer and generate customised dashboards.

Financial IT: Blockchain technology is known as an industry disruptor. Does BoardiGo use the same cryptography on the platform?

Julien Jenoudet: BoardiGO employs an asymmetric encryption comparable to the one utilised by blockchains to secure identities, votes, and signatures. However, we do not use blockchain to execute our clients' processes since it would be too expensive and too sluggish, and our clients demand a high level of consistency when they are online and running their boards. In other words, they want to see it immediately when, for example, a board member votes. However, we use a decentralised cloud known as IPFS to ensure that our Certificate Revocation List is always accessible to third parties.

Financial IT: What Is a Certificate Revocation List (CRL)? How does BoardiGo apply CRL on its platform?

Julien Jenoudet: The list of revoked certificates pertains to the legitimacy of signatures and votes. When a user is onboarded to the BoardiGO platform, a certificate tied to his/her identity is generated and utilised for signing and voting. Using unique technology in our private cloud, we ensure that only that person can activate the certificate associated with his/her identity. Of course, the eIDAS legislation mandates us to "tell the world" if a certificate is compromised, and we do so by posting the Certificate Revocation List.

Financial IT: What are the trends that we should expect in governance process technologies in the next 1-2 years?

Julien Jenoudet: The key trend is rapid growth. According to Verified Market Research, the global board portal market size is projected to grow from US$2.48 billion in 2018 to US$ 10.43 Billion by 2026, at a CAGR of 20.15% over that period. Integration of cloud-based technologies with board portal software is expected to support market growth during the forecast period.

Of course, you also need to consider what is driving that growth. Remember that a board portal is a system that encrypts and completes internet-based tasks to facilitate management meetings, communication, and collaboration between the board of directors and directors. In addition, it is utilised to deliver content to the directors via mobile devices or various websites. As cybercrime increases rapidly, the requirement for a secure platform for board meetings has increased significantly.

Jean Van Vuuren,
Associate Vice President – EMEA Commercial, Hyland

Jean Van Vuuren is Hyland's Associate Vice President – EMEA Commercial Sales, and boasts over 25 years in the Content Services and Process Automation space, where he's focused on growing market share within EMEA and increasing customer satisfaction.

At Hyland, his focus lies in helping Hyland's EMEA customers provide solutions to their digital transformation needs by implementing Hyland solutions. Prior to joining Hyland, he spent 15 years at EMC, leading its healthcare division.

TRUST IS KEY TO FUTURE SUCCESS OF AI

Across the financial services sector, firms are looking to make their processes faster and less resource-intensive, with increasing numbers turning to artificial intelligence (AI) to automate their decision-making. On the face of it, this is a good thing for consumers, since their applications are dealt with sooner.

However, there are concerns that such efficiency comes with a caveat. What if the decisions being made aren't fair and cause financial exclusion by unintentionally discriminating against certain groups or individuals?

In other words, there may be inbuilt bias in such decisions, something the European Commission defines as "an effect which deprives a statistical result of representativeness by systematically distorting it".

A widespread issue?

There is growing belief that such unintended bias exists and is a major issue for the sector. The UK Centre for Data Ethics and Innovation Barometer, for instance, has described this kind of bias as "the biggest risk arising from the use of data-driven technology" and has started to work with others to help bring about more responsible data sharing and better public sector AI and data use. The European Banking Authority (EBA), Bank of England and the Financial Conduct Authority are also exploring the potential social impact and AI adoption, challenges and risks.

But if algorithmic bias is a real problem, just how big is it?

No one is quite sure, though a pilot study being run by the NHS into bias in the allocation and delivery of health and care services may help provide some answers.

And if it is a major issue, what can be done to address it?

'Algorithmovigilance' may be the answer. In other words, the systematic monitoring of the algorithms used by financial institutions to ensure that processes such as credit referencing and fraud and AML checks aren't unconsciously discriminating against particular individuals or societal groups.

The source of bias

How does this unintended bias happen in the first place?

Generally, the starting point is the use of datasets that are incomplete, incorrect, or not up to date, to which programmers, managers and other stakeholders then add their own assumptions and prejudices. It is from this mix that skewed algorithms emerge.

And once they become embedded in the fabric of an organisation, these unwanted behaviours are — like bad habits — hard to root out and change.

Any AI system must of course be designed to meet all legal, social and ethical standards. So, if financial firms aren't paying sufficient attention to algorithmovigilance, they may expose themselves to legal and regulatory risks that, if not properly managed, could result in long-term reputational damage.

And given that consumer trust is a much sought-after commodity, making sure you are doing things correctly and delivering on your promises is of paramount importance. What's needed is real transparency, which means that if you can't justify your decisions when challenged, you have a problem. In other words, it's all very well the computer saying 'no', but is the computer always right?

Rooting out bias

Organisations that are truly 'algorithmovigilant' will be better placed firstly to identify the biases that result in unfair decision-making, then adjust them accordingly.

And given that most banks have already bought into the benefits of artificial intelligence, the potential for algorithmic bias is growing, and the spotlight will increasingly fall on those who are not seen as playing fair.

So, senior industry leaders must ensure that algorithmovigilance becomes embedded in every nook and cranny of their corporate and governance processes, and that staff are trained to be far more aware of unintended bias when working with data or building machine learning models. And such training needs to be continuous since there is always potential to drift back towards discrimination.

This requires continuous monitoring of algorithm-generated decisions to spot anomalies, with algorithms adjusted as necessary in response to changing market and societal conditions.

Without this, firms in the financial services sector won't be able to declare with any real confidence that their application procedures are unbiased.

A plan of action

Setting up a team of subject experts to create a knowledge centre is a good way to begin, since this will help ensure consistency of approach across the organisation and provide a focus for the regular monitoring of customer data to confirm that it is as complete and accurate as possible.

Organisations would also do well to work actively with regulators, so they have a better understanding of what is current best practice – within their industry and beyond.

Technology is there to serve us. But that only happens when it is properly managed, so we must be continually alert to potential issues that may result in the reverse.

This is a challenge for all industries, but along with perhaps healthcare, is most profoundly felt in the financial sector, where wrongly made decisions can have a profound effect on individuals.

We certainly don't want to get to a point where consumers feel they are at the wrong end of AI decisions that a bank can't explain and regulators lack the technical expertise to investigate.

So, algorithmovigilance is a way to keep technology on track and help ensure that the social, cultural, legal and reputational consequences of discrimination, either implicit or explicit, don't ultimately lead to a permanent erosion of trust.

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Financial IT
Innovations in FinTech

XP&A'S HIDDEN BENEFIT: THE PERFECT COUNTERWEIGHT TO STAFF ATTRITION?

A new breed of enterprise planning promises to deliver joined-up visibility and rapid time-to-insight. But could it also provide a finance team a morale booster? James McEntee, UK&I Managing Director, CCH Tagetik, explains how xP&A encourages cross-functional value creation and upskilling: precisely, the proposition finance needs to attract and nurture sought-after talent.

What are finance team employees looking for?

"Employees want more from their employers than just a paycheck. They want to be challenged, they want to work in a space into which they can bring their whole selves, and they want leaders to mean what they say and say what they mean".

This comes from LinkedIn's recent Skills Advantage Report, which looks at employees' attitudes in what has come to be known as the 'great resignation'. The theme is clear: people want to be stretched. To stick around, they want the promise of career advancement and the reassurance that what they do daily adds value to the business.

So how does this impact the finance function? On one hand, business requirements and employee ambitions appear broadly aligned. The talk is about finance evolving its role as a genuine business partner, with less emphasis on bean counting and a much greater focus on delivering insight. If realized, the function's evolving purpose offers a much broader canvas for finance professionals to widen their experience, expand their knowledge base and even aspire to different positions within the company.

Recent shocks – from the global pandemic to geo-political movements like Brexit and the Ukraine conflict, even Black Swan events in Supply Chains like the Ever Given Suez blockage – led many businesses to step up digital transformation. Yes, this often meant greater adoption of 'business-partnering' capabilities such as data integration and scenario analysis. Potentially more worrying to some employees, however, it also meant that process automation gathered pace World Economic Forum estimates suggest that accelerated automation will lead to a displacement of 85 million jobs and the creation of 97 million new roles by 2025. Change means uncertainty, with potential winners and losers. Employees want reassurance that new processes and technologies offer genuine development and role-enhancement opportunities.

This brings us to a further trend in finance: the growing popularity of extended planning and analysis (xP&A). By embracing this new approach to planning, companies can transform decision-making capabilities on an organizational level. They can also finally deliver on their promise to reinvigorate finance as a business partner, adding value to individual roles.

What makes xP&A different?

According to Gartner, "Cloud xP&A consists of financial planning and analysis (FP&A) and multiple packaged operational planning solutions delivered on a single integrated, composable, data-harmonized vendor platform. It "extends" traditional FP&A solutions focused solely on finance into other enterprise planning domains such as workforce, sales, supply chain and marketing." Therefore, taking the best elements of financial planning & analysis (FP&A) and extending them across the enterprise.

When a business problem arises, the traditional approach to planning usually involves multiple stakeholders, all assessing how to respond, drawing on their own data sources and planning processes.

By contrast, xP&A enables ALL operational and financial planning to take place within a single platform. It holds the data required for those planning processes within the platform comes with predictive learning and machine learning capabilities for more accurate insights.

This offers clear organizational advantages. xP&A promises to finally deliver accurate, holistic visibility, a single source of truth, enterprise-wide alignment of priorities, and faster decision-making.

The personal benefits of xP&A for finance professionals on the ground tend to attract less discussion. For any organization seeking

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James McEntee is Managing Director of CCH Tagetik UK & Ireland, part of Wolters Kluwer:

James has spent his career understanding the complex challenges of the Office of the CFO and translating that understanding into intuitive, enterprise-scale performance management solutions that drive business results.

to recruit and retain the best talent, however, these benefits are compelling.

Fostering increased commercial awareness

How well do finance employees understand what happens elsewhere? Each line of business has its own priorities, targets, and expertise. xP&A does not seek to ignore or dilute this. Rather, it ensures that all planning processes use the same set of numbers across a single, cross-departmental view.

xP&A encourages finance and operational planners alike to adopt a wider perspective, to develop a greater understanding of each other's point of view, and to collaborate in making decisions. For example, at first, glance, overhauling logistics in a particular way might make little sense from a cash flow perspective. However, drill into the departmental data, and you appreciate why your supply chain director is advocating it. Ultimately, collaboration enables a balanced solution to be found.

Instead of just 'running up a report,' finance employees involved in this process can develop genuine and useful knowledge of what makes other parts of the business tick. They are also much better equipped to develop potential solutions to business problems and add real value to their – organization.

Enabling internal mobility

A business department needs assistance in formulating its ESG metrics. Having become familiar with that department's operational drivers and KPIs through the xP&A framework, one of your finance team members is a prime candidate for secondment.

By fostering greater cross-departmental contact and knowledge, xP&A helps create an environment where the flow of talent between different business areas becomes much more viable. This internal mobility – including lateral mobility – can significantly boost retention. In fact, LinkedIn found that companies that excel at it retain employees for twice as long as those employers who struggle with it.

Broadening skillsets

Savvy finance professionals are acutely aware of what it will take to future-proof their roles. One of the most attractive aspects of xP&A is its ability to support those ambitions.

On the technical side, the best solutions provide plenty of scope for gaining experience in drawing out insights and generating precise, useful forecasts from potentially vast quantities of operational data. Soft skill development is crucial, too, including adaptability, communication, and a willingness to become more closely involved in what is happening company-wide. An xP&A framework is ideal for nurturing and putting these capabilities to work.

Wolters Kluwer was recognized in the 2022 Gartner® 2022 Market Guide for Cloud, Extended Planning, and Analysis Solutions. Its platform, CCH Tagetik comes with comprehensive coverage for all planning types, along with powerful predictive intelligence capabilities out-of-the-box. To find out more, speak to us today.

Wolters Kluwer

STRUGGLING TO DIFFERENTIATE? HOW EXCEPTIONAL CX COULD HELP YOU WIN OVER DIGITAL-SAVVY CUSTOMERS

Financial Services organisations are entering a trying time. Business leaders are being kept up at night by an abundance of challenges: increased competition from digital banks like Monzo and Revolut, economic uncertainty, evolving regulatory scrutiny, and new expectations from digital-savvy customers.

Thankfully, every challenge is also an opportunity for differentiation, transformation, and innovation. In this climate, those that can adapt quickly to meet customers' digital needs will thrive.

Differentiating Through Exceptional Customer Experience

How you make your customers feel can help you to stand out from the crowd as a business. For FinServ organisations, offering an exceptional digital customer experience is the ideal place to differentiate in the minds and hearts of consumers.

Sadly, CX has typically been at the bottom of the priority list for most traditional FinServ organisations. Limited competition meant little motivation to differentiate through a more personalised customer service.

Today, FinServ organisations must put CX at the heart of their digital transformation strategies if they hope to compete with their digital-first challenger competitors. But get this right, and there will be a direct knock-on effect on sales, conversions, and customer retention rates. CX is where transformation turns into bottom-line impact.

So, what does this look like? And how do you give digital-savvy customers what they want without compromising security and compliance?

It's All in the Data

The starting point for any FinServ organisation should be data.

With such widespread access to customer and interaction data, FinServ organisations already have an asset that's ready to be leveraged for competitive advantage. But, be warned, it's not enough to just collect it.

Organisations operating in silos won't be able to keep pace with those that rigorously capture, analyse and, crucially, share data across the business to be acted upon. It takes insight and understanding to turn known customer behaviours and preferences into decisions that translate into bottom-line growth.

What does this look like in practice? Customer expectations aren't just changing, they are changing fast. The only way to keep up is real-time access to customer data that can identify new trends across all digital touchpoints. For example, data will tell you that most consumers now flock to 'Search' when trying to resolve an issue. Why not leverage these insights to understand what they are searching for and serve them content that helps resolve their issue with your banking service?

Smarter Self-Service that Empowers Customers

Over the past few years, FinServ has seen sharp rises in demand, supported by mostly

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NICE

flat budgets. Consequently, automation is no longer a 'nice to have' – it's essential.

However, while investment in automation is vital, this is just one part of a wider interlocking digital transformation strategy. It's not just a case of finding new ways to scale up and meet demand. FinServ organisations must simultaneously meet this demand in the right place and at the right time.

Self-service is the perfect example of this. Customers don't always want to speak with an agent. Today's customers are educated and looking for speed and ease so they can resolve issues themselves. Smart self-service offers them exactly this and, as such, is becoming an important first point of contact for FinServ organisations. For example, AI-powered self-service gives your customers the ability to solve problems on their own by making the right information available on demand at their point of need – be that within search, social media, your website, or app.

Crucially, the experience must be frictionless. This is because while 84% of consumers are more willing to do business with companies that offer self-service solutions, only 61% say these solutions are easy and convenient. Those organisations that offer self-service, which feels like a seamless part of the customer journey, will see the best results in both boosting customer satisfaction but also in reducing operational costs caused by friction.

Don't Compromise on Compliance and Security

We can't talk about digital CX within FinServ organisations without mentioning compliance and security. Unlike many sectors undertaking digital transformation, FinServ organisations face unique pressure in terms of security, privacy, and compliance. Over the past decade, these pressures have only intensified, with organisations rightly being held to account by lawmakers and prosecutors alike. Therefore, any strategic changes need to account for a complex web of rules and regulations. This can result in a more disjointed, and dissatisfying, customer experience for consumers. And it is here that technology really can help.

For example, AI-powered platforms can be used to monitor and detect compliance gaps such as audio loss, customer deletion requests, and recorded sensitive authentication data. Alternatively, dedicated agent apps can be designed to gain compliance insights, triggering real-time information on things like recording assurance or audio loss.

Digital Customer Experience: The Time is Now

Over the last decade, FinServ organisations have worked hard to accelerate digital transformation projects and keep pace with evolving customer demands, ever-changing rules and regulations, and the innovative services offered by challenger banks.

But good customer experience is not a destination, it's a journey. CX must now be placed at the heart of a digital transformation strategy – it cannot simply be an add-on. Those that use their data to truly listen to customers – and act upon their requests – will be the ones to beat over the next few years.

NICE ACTIMIZE

INVESTING IN OPEN FINANCE: UNDERSTANDING THE CONSUMER

Open Banking has changed the way financial institutions manage customer data and finances – particularly online payments. Recent research by Curity shows that 43% of all large financial institutions say they have adopted Open Banking.

Open Finance infrastructure has enabled third-party fintechs to use relevant consumer data provided by banks and other financial institutions to greatly expand the scope of their financial services. As long as user consent is obtained first, third-party providers can use this information. As a result, organisations have responded to this change by choosing to invest in new apps and digital services.

Curity found that 40% of organisations plan to invest in services provided through Open Banking. Within a short period of time, the sector has achieved strong consumer adoption and is set to stay. However, there are more ways to accelerate this.

Understanding the benefits of Open Banking

The average consumer does not need to understand the ins and outs of Open Finance. However, banks do play a crucial role in educating consumers on the benefits of utilising technology to access products and services.

Never before have consumers had such flexibility and choice as challenger banks spearhead change in how consumers manage their finances. In order for consumers to experience the full benefits on offer, the financial sector must place a greater emphasis on educating the consumer.

This should be viewed as an opportunity – a chance for Financial Institutions (FIs) to develop trust with consumers, and show their commitment to improving customer experiences.

96% of organisations globally believe consumer adoption is crucial to the future of Open Banking. Without consumer understanding, Open Finance is a business-only technology. Without consumer buy-in, this sector cannot innovate.

Now is the time for FIs to act fast and deliver on consumer education to ensure mass adoption.

Secure data sharing

Currently, hesitancy exists towards Open Banking and the idea that 'sensitive' and personal data is shared with third-party FIs. The threat of data breaches is a significant concern and can often leave consumers sceptical of using financial technology.

While these concerns are understandable, they do not accurately reflect the reality of the risks posed by Open Banking. A crucial part of the Open Banking experience are Application Programming Interfaces (APIs). APIs enable the efficient exchange of data between applications, services, and customers.

Acting as the backbone for Open Banking, APIs allow backend communication between

Jacob Ideskog,
CTO, Curity

banks and FIs without the need to share any login details on the front-end. APIs must be properly secured and protected to ensure sharing data such as codes or passwords is not revealed to anyone.

As we move towards a passwordless future, businesses will be encouraged to adopt biometric or other authentication measures to guarantee security. In return, we should see consumers trusting that their financial information is protected and safe. Without improved consumer awareness and understanding of the security systems currently in place, consumer hesitancy will continue and Open Banking will struggle to expand.

Creating a confident consumer

The foundation of Open Banking is rooted in providing consumers with choice about how they manage their finances. To facilitate this choice, the universal integration and the protection of APIs are necessary.

This means providing a service that offers a seamless exchange of information between brokers, banks and third party FIs to enhance customer experience. This, in turn, will help to facilitate a highly secure service that can deliver advanced insights and personalised advice to customers.

A robust financial network will win over a hesitant customer and further ensure the mass adoption of Open Banking. According to the OBIE, five million people now use Open Banking in the UK and there is every chance that this number will grow.

Open Finance initiatives are springing up from across the globe to include all consumers. In the US, legislative efforts to address privacy concerns associated with Open Banking – installing a legislative framework similar to Europe – are in full swing and are set to continue. Whilst there are several fintech startups making waves with exciting plans to further accelerate adoption in the APAC region.

Taking the final step

Traditional banks are ready to modernise and keep up pace with radical changes in the financial services sector. New competitive challengers are rapidly gaining ground in this sector. Consumer adoption will be the key ingredient to success and this requires education. Consumers must understand how and why their data is being used, and be reassured that it is secure and protected.

It is now up to banks to educate consumers on the developments in Open Finance and the benefits they offer. As millions grapple with the cost of living crisis, Open Banking could help millions of customers to find the right financial solution for them.

Koen Vanpraet,
CEO EMEA,
Moneycorp

PAYMENTS IN 2023: REMOVING INEFFICIENCIES AND IMPROVING TRANSPARENCY

As we approach the end of yet another tumultuous year for businesses and the economy, it's important to take time to reflect on how businesses have evolved despite ongoing disruption. In fact, it's often during the most challenging economic times that we see innovation among businesses, fintechs, and financial institutions surge as they pivot to survive potential crises.

With regards to payments, in particular, the past few years have been taxing to say the least, but have also catalysed the payments environment and cemented its importance as an enabler of business growth. As we step into 2023, there are some clear trends developing that I believe will drive innovation in the new year and beyond.

Blockchain, KYC, on-boarding and risk

For any business operating across multiple jurisdictions with cross-border requirements, compliance mandates that they must complete a comprehensive onboarding process with relevant KYC and KYB checks in place. However, with no industry-wide standard approach for this process, businesses often have to complete different onboarding processes with every payment or financial provider they work with. This ultimately leads to onboarding inefficiencies, siloed data, and delayed processing times.

Already, we're beginning to see the potential for blockchain to alleviate these inefficiencies – eliminating silos and improving transparency for those involved in the process. As an immutable and decentralised source of information, blockchain systems can enable transparency in the KYC process by giving financial institutions secure access to a business' data. While still in a nascent stage, firms such as KYC Chain are beginning to demonstrate the potential of this approach.

Meanwhile, this immutable truth and transparency is continuing to intrigue risk management professionals on blockchain's potential in their line of work.

As a decentralised peer-to-peer framework, the blockchain poses both opportunities and risks for a business. According to Deloitte, by disintermediating central entities such as banks and creating an immutable audit trail of transactions, there is the potential to lower costs, decrease settlement times, and improve transparency for all parties. In contrast, however, this moves the business away from a human-based trust model to an algorithmic-based one – which could open up businesses to further risks.

So while I expect we will see interest grow in these areas, it will not be without caution and careful risk assessment.

Simplifying cross-border payment complexity

As the pandemic and economic developments – such as the war in Ukraine – have hampered business operations, many have been required to pivot their approach. As businesses have sourced overseas suppliers and expanded their customer base internationally, cross-border payments have surged significantly – with the Bank of England expecting its value to increase to over $250 trillion by 2027.

Despite these predictions, there are still significant inefficiencies and barriers to streamlined cross-border transactions. According to a report by MasterCard, which highlights the payment challenges faced by businesses, many have reported issues surrounding delayed payments, unpredictable exchange rate fees, and fraud when making international transactions.

With such a growing business dependence on efficient cross-border payments, it will be vital the industry focuses its attention on solving these challenges. Growing innovations in real-time payments, digital wallets and multi-currency IBANs are helping to make steps in the right direction here, and I expect conversations to grow around reducing industry-wide complexities in 2023.

Embedded finance and building single 'boxed' payments value proposition

Embedded finance – essentially the embedding of financial products within a non-financial provider's business – has seemingly become an industry buzzword over the past year. Yet industry experts Bain & Company predict this approach could be worth as much as $7 trillion by 2026.

Embedded finance has already become widely adopted by B2C firms. A commonly cited example comes from Uber – announcing 'Uber Money' in 2019, which saw it creating credit cards and instant earning services for its drivers. Other examples have seen eCommerce providers like Amazon implementing Buy-now, Pay-later services into their customer journey. But for businesses, there is still room for adoption.

With businesses often using multiple financial solutions, increasingly firms are looking for ways to embed all their financial tools into one interface. Whether lending, payments or other services – there is still a massive disconnect when it comes to keeping track of these products and the user experience.

For example, small business owners are often still required to use separate platforms to access their bank accounts, make payments, generate invoices, and manage their cash flow. As the industry looks to improve efficiencies for businesses in 2023, those that can reduce complexities here will be best placed to enable business growth.

Payments in the metaverse

Last but not least, the Metaverse has seen growing speculation around how payments will exist in the virtual world.

A combination of various 'realities' and technologies – including virtual reality, augmented reality, and smart connected technologies – the Metaverse would enable people to interact with both the physical and virtual world simultaneously. Although many conversations about the Metaverse have currently been led by Facebook and Microsoft, I've no doubt that fintechs and financial service providers will keep a close eye on its development.

After all, where there is new technology, there are bound to be payments being made, and therefore money to be made.

moneycorp

WHY FIRMS NEED TO WIN THE ESG EXPERTISE RACE

All stakeholders are becoming more knowledgeable about sustainability and firms must develop water-tight strategies to stay ahead

MHR

The rising expectation that every company's stakeholders have in relation to Environmental, Social and Governance (ESG) is one of the burgeoning risks facing the corporate world. Every firm's suppliers, customers, partners and employees are laser-focused on ensuring that the companies they have a relationship with not only think about their impact on the environment, but act upon it too. And not only do they need to act upon it, they must also have a clear and concise plan that is both actionable and measurable to ensure genuine progress can be achieved.

According to consultancy firm PwC, ESG is the "number one topic investors want to discuss with directors during shareholder engagements", and it seems some businesses are responding. In the auditor's Annual Corporate Directors' Survey, nearly two-thirds (64%) of directors say their strategy is tied to ESG issues.

However, it's likely that this number will grow in the near future, and so every business needs to up its ESG game.

ESG is not an option, it's a necessity

Having a sustainability approach is now non-negotiable for any firm.

Regardless of the industry, sustainability should be at the core of the executive agenda. This is because a true understanding of ESG not only means that the leaders of a business understand the risks facing their firm, but they comprehend the opportunities too.

This is vital in a world where all types of stakeholders are making decisions about how truly invested they believe a company is in its ESG goals. A First Insight survey found that 73% of Gen Z consumers would pay more for sustainable products, while a Deloitte survey found that 49% of the Gen Z cohort had made career choices based on personal ethics. Furthermore, a Gartner paper found that 85% of investors considered ESG factors in their investment decisions.

This focus by the outside world on every company's ESG efforts means that those firms that have Corporate Social Responsibility (CSR) frameworks must develop these to become fully fledged sustainability strategies.

Revolution required

Broadly speaking, CSR is an inward-looking construct, focusing on processes

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MHR

and company culture, while ESG relates to a measurable set of targets and goals that external partners and investors look at when evaluating a company.

Having an ESG framework can assist firms in identifying areas of waste within their organisation, while it can also help assess whether the actions and processes a firm engages in help to create a responsible and ethical company.

Although CSR is not entirely redundant, it should not be the goal for firms. It may be a useful starting point for organisations looking to create an ESG framework, though, as it would likely mean that business leaders were already focused on acting in a responsible, sustainable and ethical manner.

There is no cookie-cutter approach for creating an ESG framework from scratch, or for developing a CSR strategy into an ESG one, but it's vital that firms get their plans right. Worryingly, an Insead survey found that 70% of board directors said their board was ineffective at integrating sustainability into governance and strategy building, while only a quarter of board directors say boards understand ESG risks.

Clarity required

With intense scrutiny on all ESG plans by stakeholders, and recent moves by the government to make climate-related reporting compulsory for the UK's financial institutions and listed firms from 2023, it's incumbent on businesses to develop transparent, honest and purpose-driven strategies.

At MHR, our approach is clear: Planet, People, Profit. These touch on the environment, social, and economic strands of our business. An example of this is our two new office buildings due for completion later this year. Both are receiving significant investment in solar energy and will also have 2-3 times the normal level of insulation to ensure that both buildings are almost carbon-neutral and have an A energy rating, compared to the D, E or F most buildings have.

In terms of people, the 'social' aspect of ESG, it's not just about considering how to best look after your employees, but the wider human element of a business, both internally and externally. Internally, this means focusing on what employees actually want, offering the likes of ongoing professional development and employee benefits that support their needs, which can often be as important, if not more, than pay.

Externally, this can translate into investing in your local community. Each business can play a positive role in the lives of those in their local community. At MHR we work with local charities and community events, hire local talent, and work with local suppliers wherever possible. If an organisation does the right thing, not only does it foster stronger community relationships and make a positive impact, but it can also bolster employee job satisfaction, engagement, and performance.

And finally, profit is also critical – firms need to grow to enable them to support more people and, crucially, give back to society in a bigger way. That's why, at MHR, we've aligned our strategy to the UN's Sustainable Development Goals, with a commitment to creating a sustainable, local community. Again, by providing job opportunities to local people and using local suppliers, not only are we providing a significant financial injection back into the community, but by shortening our supply chains we are reducing our carbon footprint too.

Taking a sustainable approach also makes great business sense. There is a growing body of research that suggests investing in environmentally-minded companies can produce better returns for investors than those with a lower-than-average environmental performance.

This potentially creates a virtuous circle for firms with robust ESG plans; not only will they be more aware of the dangers to their business models from climate change and be able to identify the aspects that could be altered to enhance their operations, but creating an ESG strategy will make them more attractive to investors and, potentially, give those investors better returns.

Every business leader already knows they have no option but to create an ESG strategy. However, it's those that understand it isn't simply a tick-box exercise, and accept that hastily cobbling together an unsatisfactory plan will be detrimental at best, and disastrous at worst, that will clinch a bright future for their company and all stakeholders.

THE SAUDI ARABIA OF DATA

What will replace oil?

In December 2020, then UK Prime Minister Boris Johnson said that he wanted his country to become the "Saudi Arabia of wind power" as a part of its Green Industrial Revolution.

The Prime Minister – fairly – saw no need to mention Saudi Arabia's dominant position as a supplier of crude oil.

Of course, no major supplier of oil (or gas) can take its leadership for granted.

For its part, the Saudi government has announced its hugely ambitious Vision 2030 program. This aims to transform Saudi Arabia so that its economy and society can thrive in the post-oil age.

Along with much else, the Saudis are looking to exploit the potential for artificial intelligence (AI), and especially since the establishment of the Saudi Data and Artificial Intelligence Authority (SDAIA) – and two related organisations – on 30 August 2019.

In its first year of activity, SDAIA had: established a national databank, consolidating 80 different government databanks, accounting for 30% of the digital assets of the Saudi government; started building the G-Cloud, with the eventual aim of handling data from more than 40 government bodies; and using AI to identify opportunities for US$10 billion in new revenues or cost savings for the government, "developing an ambitious and innovative data and AI strategy" for the country.

Further specifics were highlighted at the second Global AI Summit, which was held in mid-September 2022. The Saudis are partnering with large companies and universities in California (and the World Bank). They are training tens of thousands of young people as data scientists and coders. Some 30% of these people – a higher number than the average across

Delegates at the second Global AI Summit. Source: the author the member states of the OECD – are women. The Saudis are applying AI in real life: Saudi Aramco, the gigantic state-owned energy company, can do geological interpretations in hours instead of months, for instance.

The applications for AI go much further than just geological interpretations, of course. Early diagnosis of diseases and other medical problems (when they are more treatable) is one example of what AI can achieve. Better management of electricity generation and distribution is another. AI can also be used to improve education systems.

AI also enables robots. AI technology provided by WeRide powers driverless buses that are already in operation in several large cities in China. An example was showcased at the second Global AI Summit. Meanwhile, Saudi Excellence Company, a substantial local private sector group led by Sheikh Abdullah Zaid bin Nasser Al-Meleihi, has signed a memorandum of understanding (MoU) with the US enterprise Nala Robotics to bring robotics services into the Saudi market. According to the MoU, the US company will supply software and robotics equipment that will enable Saudi food companies to gain greater efficiency in production and improved quality.

There is, therefore, a plan which overcomes the perceived strategic problems of Saudi Arabia and/or makes them advantages. That most of the population is under 30 years of age, digital native and often under-employed is a plus. They are the skilled technicians of the future. Unlike grandiose build-it-and-they-will-come megaprojects, it is not necessary for foreigners – who often do not properly understand Saudi Arabia – to actually come to the country to assist SDAIA and other protagonists with the development of AI. Much can be done remotely.

In late September 2022, the World Intellectual Property Organisation (WIPO) noted that Saudi Arabia had jumped 15 ranks in its Global Innovation Index (GII). In four of the indices compiled by WIPO, Saudi Arabia ranks among the top ten countries globally.

In the oil age, a country needed control the reserves in the ground. In the technology age, a country needs to own the Intellectual Property. The Saudi government has the vision and the money to make the AI strategy a reality. It is not impossible that Saudi Aramco will be transformed from being a huge energy company with interests in AI to an AI giant with a sideline in oil.

When SDAIA first presented its brand identity in March 2020, it noted that AI should contribute US$135 billion to GDP of Saudi Arabia, or some 12.4% of the total. The theme of the presentation was: “Data is the oil of the 21st Century”.

Andrew Hutchings,
Editor-In-Chief, Financial IT

He attended the second Global AI Summit, held in Riyadh on 13-15 September 2022, as a guest of the Saudi Data and Artificial Intelligence Authority (SDAIA).

A WeRide driverless bus at the second Global AI Summit. Source: the author

ST. CROIX, USVI
A NEW INTERNATIONAL STRATEGIC HUB

Anthony Weeks,
Managing Director of SEDI-CASE
Special Economic Envoy to Taiwan and Asia-Pacific Region

Regional and global supply chains are changing rapidly.

Commercial, and political, decision-makers in the West want to reduce their dependency on China as a supplier. That means that they are replacing supply chain hubs in Southeast Asia (especially) with centers in geopolitically friendly (and safe) countries in other parts of the world.

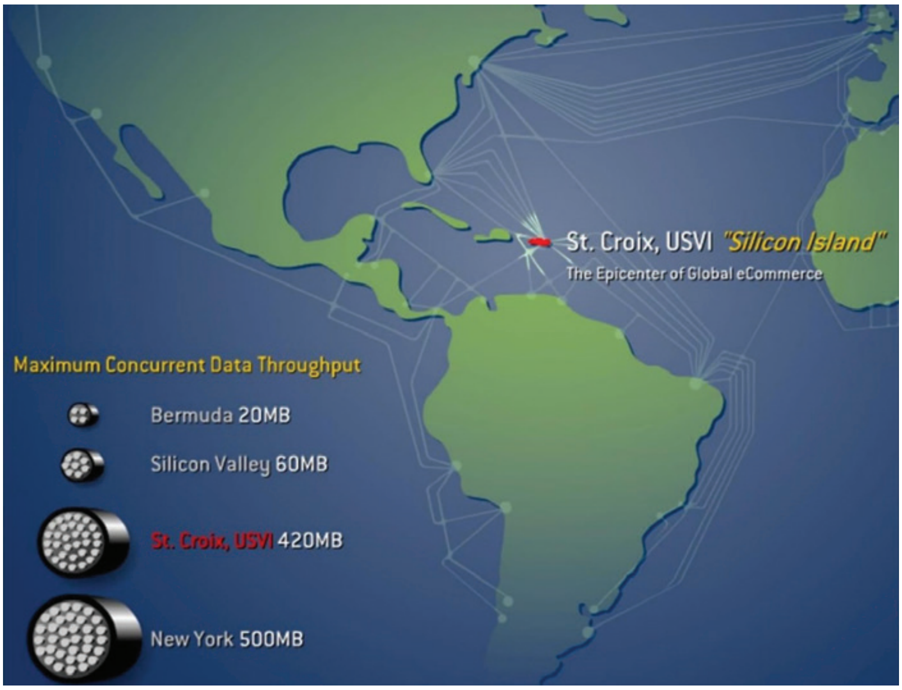
US multinational companies have been relying on mainland China for low-cost manufacturing of all sorts of consumer goods, products, industrial equipment, and parts for decades now.

In 2020, the Covid pandemic exposed the West's vulnerability to China as the world's manufacturer and supplier: a new paradigm clearly became essential.

This was at a time that low labor costs in China and other parts of the Asia-Pacific region were no longer the main factor determining the geography of supply chains.

This is because of the highly skilled labor that is needed to work with components, designs and processes in many industries – ranging from consumer electronics and computers to automobiles, logistics, energy and defense/ aerospace. Quality now matters much more than price.

Meanwhile, digitization is revolutionizing services. In distribution, for instance, it is essential for time to delivery to be minimized: economies of scale are often central to a distributor's competitive edge. In financial services, newly founded fintech firms are competing or collaborating with long established banks.



New opportunities in the United States' backyard

The United States Virgin Islands (USVI – an unincorporated territory of the United States) is ideally placed to benefit from these changes.

At a time that many businesses are looking to be physically closer to their clients, the USVI benefits from its location in the center of the Caribbean – being a relatively short distance from the mainland United States, the Panama Canal, northern South America and western Europe.

The USVI also gets advantages from the general stability that come through US laws, policies, and regulations. However, the USVI enjoys an exemption from the Jones Act – which means that foreign flagged ships can travel from the islands to multiple ports of call in the US mainland. Foreign companies can partially assemble or manufacture products in the free trade zone (FTZ) of St Croix and label the products as having been made in the United States: the products may then be taken to the United States without US duty being payable. There are also Qualified Opportunity Zones on St Croix and St Thomas where investors enjoy exemptions from capital gains tax or income tax.

Equally important, the infrastructure is excellent in ways that matter. St. Croix, the largest of the USVI, is home to world's second largest fiber-optic cable networks in terms of data throughput. (They are larger than those of Silicon Valley and second to those of New York). Cables linking North America, South America and Europe meet in St Croix. The island is home to one of the world's largest energy terminals.

The USVI will also be an important protagonist in the United States-Caribbean Strategic Engagement (CASE) Act of 2016. The Act seeks to promote economic, political and security integration, to boost global competitiveness and to improve energy security.

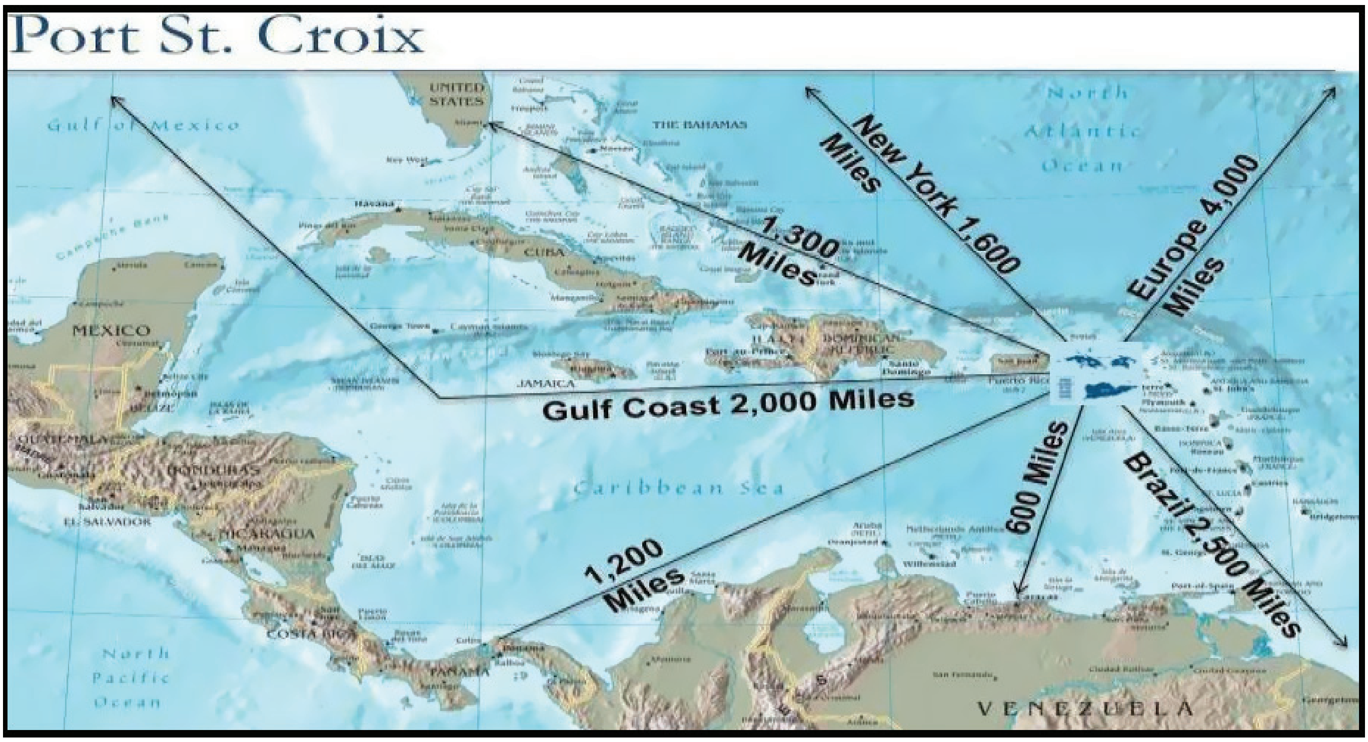
The bottom line is that the USVI – and St. Croix in particular – is unusually, perhaps uniquely, placed to benefit from the changes that are taking place to regional and global supply chains. Taking a five-year view, the USVI could be a very important international strategic hub, both in the context of the Caribbean and of further afield.

St Croix is being promoted by St. Croix Economic Development Initiative (SEDI), a macroeconomic and public policy think tank.

Through its SEDI-CASE initiatives, SEDI is connecting the USVI to key markets along the US east coast, from Boston MA to Miami FL. Further afield, SEDI is promoting links with Taiwan, China, as well as South Africa and centres in Latin America and the Caribbean.

The SEDI-CASE New York-USVI Inaugural Summit is scheduled for 9-10 January 2023 in New York City. The Summit will continue 12-15 January in St. Croix, USVI.

To learn more visit
www.CaribbeanAmericasSingleEconomy.com



Matt Peake,
Global Director of Public Policy,
Onfido

SIX KEY CONSIDERATIONS FOR ETHICAL AI IN FINANCIAL SERVICES

Biometrics has quickly become embedded in our everyday lives, particularly facial biometric technology which is commonly used to unlock smartphones and access online applications. With 8 out of 10 people finding biometrics both secure and convenient, it's seeing widespread adoption across financial services.

Biometric verification is powered by artificial intelligence (AI) systems which rely on models trained with data. This enables them to recognise, categorise and classify facial images very quickly and accurately. With 68% of large companies in the UK having adopted at least one AI application, the technology has real consequences for real people and therefore must be built properly.

For this reason, it has to be subject to ethical parameters as it is developed and implemented. Within financial services, this is particularly important given banks and payment service providers are the gateway to financial inclusion and services based on trust.

There are six key considerations typically associated with ethical AI: fairness and bias, trust and transparency, privacy, accountability, security, and social benefit. If just one of these fails, it can have serious consequences for individuals and businesses. This includes financial exclusion, delayed innovation and growth, and lack of regulatory compliance.

Delaying or ignoring the issue, or passing the responsibility to engineering, compliance or legal teams is no longer an option. Leaders within organisations, no matter the department, must take an active role in seeking to address the flaws in their applications and be accountable for the performance of AI that they deploy.

Why is ethical AI so important?

AI is used across multiple functions of finance from fraud detection and risk management to credit ratings, and so plays an essential part in the processes that underpin everyday life. If AI is not ethical, it damages trust in the system and erodes the value of financial services.

Currently, when issues with AI automation arise, human intervention is often the solution. But a manual fallback isn't always the best answer as humans are prone to systemic bias.It is commonly understood that bias exists in systems seeking to distinguish faces of people from ethnically diverse backgrounds. This can lead to the development of non-optimal products, increased difficulty expanding to global markets, and an inability to comply with regulatory standards.

Where discrimination occurs, the consequences can be severe and include alienation from essential services. This is why Onfido takes a proactive stance to reduce bias, having published guidance based on defining, measuring, and mitigating biometric bias, and also participated in the UK's Information Commissioner's Office sandbox to pioneer research into data protection concerns associated with AI bias published its report.

Elsewhere, ethical AI is at the heart of regulation. The UK's AI Governance regulations and the EU's AI Act outline how trust should be at the centre of how businesses develop and use AI. Not only will it be a requirement for financial services to follow the considerations of ethical AI, but it will be central to future growth. There is also an ongoing requirement for compliance with Anti-Money Laundering (AML) and Know Your Customer (KYC) regulations, holding financial institutions accountable on how they verify customers' identities. With an investment in ethical AI, financial services will improve the accuracy and reliability of their KYC processes and reduce false acceptance and rejection acceptance rates across the board.

Implementing ethical AI

There's no doubt that ethical AI is an evolving challenge that requires financial services to stay on top of their applications as new use-cases emerge and deployment grows.

Developing and deploying ethical AI should be a company-wide initiative. It requires a top-down commitment to ensure ethical practices are embedded into every stage of application development and implementation. Without such an approach, it can be all too easy to fall behind on the challenges of developing and maintaining ethical AI and encounter issues that could otherwise have been prevented. To achieve optimal outcomes, businesses must bring teams together to identify problems, define and formulate solutions, implement them, and then track and monitor their progress.

Executive teams must understand the risks of developing AI that is not ethical and the long-term financial and reputational repercussions it could have. But they must also recognise that ethical AI is the gateway to innovation, driving accurate and efficient financial services that can lead to positive social outcomes – for the benefit of all customers, no matter who or where they are.

The impact of ethical AI

By following the six considerations of ethics, financial services firms can help meet their regulatory obligations, build fair, transparent and secure systems, and demonstrate their ongoing commitment to protecting their customers.

Failure to address ethical considerations, however, runs the risk of causing long-term issues. It can lead to products and services that exclude customers, and may ultimately result in non-compliance with regulations. Embedding ethical considerations into AI development and implementation will ensure that customers are treated fairly, while financial services can protect and improve their brand reputation and build trust with their customers. When creating and using AI technologies, we must ensure that they operate fairly for all individuals and ensure that privacy is respected and upheld.

onfido

Maxim Miller,
CEO,
Exerica (part of Impak Finance Inc.)

SUSTAINABLE PRODUCT DEMAND OUTSTRIPS SUPPLY AS INVESTORS PUSH FOR MORE

The asset management industry has surfed a generation of ever decreasing interest rates, and ever receding risk of inflation – a growth engine which has suddenly come to a halt. ESG-related investment products are widely expected to replace this and become the main (or perhaps the only) growth driver in this environment.

These changes underline the importance for both managers and investors alike to understand how to capture the shift to sustainable finance as a counterbalance to potential underperformance. More often than not, investors have a better appreciation of this shift whereas asset managers just lag behind the market demand.

Nearly nine in ten institutional investors (88%) believe that asset managers should be more proactive in developing ESG products, according to PWC research. However, fewer than half of managers are planning to launch new funds. More importantly, most of these new products are retrofitted (and often mislabelled) conventional funds which are often based on dubious ESG frameworks - undermining trust and industry growth. Investors want ESG impact and accountability, to go with the financial return.

There is mounting evidence of investor appetite to build ESG into performance-related fees. Not surprisingly this has asset managers this has many asset managers looking at charging them. That there aren't any as yet speaks for itself. Asset managers have not yet developed new sustainable products to justify the higher fees that investors are already prepared to pay, based on clear impact measurement methodologies that go beyond the traditional ESG. Investors want ESG products which take ESG beyond being a brand issue or a box ticking exercise, but the truth is that these are still in their infancy.

We at Impak Finance clearly see this expectation gap, and it opens up big opportunities in months and years to come. To close this gap and attract values-driven capital, assets managers have to to differentiate their products by investing in the development of meaningful strategies supporting and delivering impact across the UN's 17 Sustainable Development Goals. Investment impact needs to be measured and based on robust and credible methodologies, and high-quality data.

In order to classify an investment opportunity as having "impact", it needs to deliver demonstrable, measurable impact, and the manager would need to report outcomes in a transparent and open manner, so that investors can understand the power of their capital to drive change. This requires investments in systems, methodologies, and data which can only be done on scale or with the help of reliable third-party vendors.

The much-needed differentiation in sustainable products can only be achieved by developing and implementing new strategies. They need to go beyond 'traditional' exclusion/integration ESG and evolve towards impact investing, which until now has been viewed as an alternative asset class despite its rapid growth.

Impact investing clearly represents a growth field for the industry. At the same time, there is still a significant gulf between what investors want and what asset managers do in response. Those who get the transition right by rethinking their strategy and entering the right partnerships will create a virtuous cycle of purpose and opportunity, yielding sustainable growth. Those who don't get it right will find sustainability underperformance increasingly becomes a performance drag.

Maxim is a founder the AI data extraction fintech Exerica which has been recently acquired by the independent impact rating agency Impak Finance. Maxim and his team help develop and improve data operations & analytics across the company which is now rapidly growing on the back of significant client demand for impact analytics. Previously, Maxim spent 15 years in finance including investment banking at J.P. Morgan and financial analysis at Fitch Ratings. Maxim holds degrees in computer science and economics.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Todd Robertson,
SVP of Business Development,
ARGO Solutions

HOW BANKS CAN DETECT AND PREVENT FRAUD LOSSES IN TODAY'S CROSS-CHANNEL ENVIRONMENT

Financial institutions gain a competitive advantage when they operate in a cross-channel delivery ecosystem, however, this also increases their risk exposure. The cost of fraud for U.S. financial services and lending firms has increased between 6.7% and 9.9% compared with before the pandemic. Every $1 of fraud loss now costs U.S. financial services firms $4.00, compared to $3.25 in 2019 and $3.64 in 2020. With check fraud attempts seeing double-digit increases, back offices are being overwhelmed with alerts for items needing manual review.

With sophisticated fraudsters conducting repetitive, small-deposit account transaction fraud attempts, it is increasingly difficult for financial institutions to detect and prevent fraudulent activity. To successfully thwart these attempts, it is important to start prevention at the point of disbursement and with automated verification and fraud detection at all points in the clearing process.

A successful fraud prevention solution consists of a blend of digital and human interaction, with an appropriate detection and decisioning mechanism to deploy both methods. With automated fraud solutions that operate across channels, bankers can be supplied with multi-fund analytics and adjudication workflow to detect fraudulent transactions and suspicious items and corresponding risk exposure.

Checks presented over-the-counter are the most frequent targets of fraudsters. By incorporating a 3-pronged approach of check stock analysis, signature analysis, and transaction analysis, automation can improve the detection and adjudication of suspect items and reduce false positives.

In addition to combatting over-the-counter check fraud, FIs need to protect the electronic channels, especially when it comes to account opening and money laundering. Since the pandemic, the annual estimated value of money laundered globally is between 2 and 5% of global GDP ($800 billion – 2 trillion).

To combat this, FIs would be well served to automate risk analysis at account opening and monitor the customer journey by utilizing customized test and parameter-driven analysis to identify higher-risk customers and activities. This technology would allow FIs to observe customer activity across all their current accounts and customer information files would be analyzed based on attributes such as products and services utilized, type of business, and income and address demographics.

An automated cross-channel approach permits FIs to aggregate cash transaction reporting based on an account number, Tax ID Number, or ID for persons involved. This approach would also allow banks and credit unions to electronically integrate the filing of currency transaction reports (CTR) and suspicious activity reports (SAR) to meet bank industry standards. This is possible by leveraging technology that assists FIs with compliance whenever a customer attempts a currency transaction of more than $10,000 or when a FI becomes aware of suspicious activity that is crime related.

An automated solution in a cross-channel environment protects financial institutions from terrorist financing activities, regulatory risks, reputational risks, and financial losses. Streamlining a bank's anti-money laundering responsibilities addresses real-time and ongoing compliance requirements and serves as a key tool to help financial institutions identify connections between individuals and entities using transaction data.

Implementing a solution that aligns with the Federal Reserve's new FraudClassifier model allows FIs to better manage the risk of check fraud, phony transactions, and money laundering activities with a more holistic view of fraudulent activity. It improves consistency of fraud classifications and creates a consistent taxonomy leading to effective quantification of fraud losses.

Leveraging technology that identifies where and when human intervention is needed is the best choice for the modern FI seeking to minimize fraud occurrences at their institution. This model equips FIs to identify and reduce risk in money laundering and check and transaction fraud throughout every channel. FI customers will continue to demand the convenience of cross-channel access as well as the bolstered security that protects financial transactions in a cross-channel environment.

As Senior Vice President of Business Development, Todd Robertson works with the largest financial institutions and healthcare providers in the United States to demonstrate how ARGO solutions can transform customer experiences and improve operational efficiency.

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