



the payments association

Power to the People:

How Open Banking is Transforming how we Access and Manage our Money

The Payments Association's Guide to Open Banking



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Foreword from Sponsor

Discover Global Network is privileged to sponsor The Payments Association's Guide to Open Banking. Our support of this paper as Knowledge Partner to The Payments Association displays our commitment to supporting thought leadership and education on a range of payments topics, including those related to open banking.

Indeed, participating in the PA's **Project Open Banking** since its inception has enabled DGN to increase its own knowledge on the topic gathered from the wealth of open banking experience within the PA community. It has assisted with establishing valuable relationships and contributed to the development of our own product roadmap and the role we can play in the global open banking ecosystem.

We are excited by the opportunities presented by open banking and particularly how it could lead to a true open finance model, if the same principles, technology (and even regulation) are applied across other industries, such as insurance, pension, and utility companies.



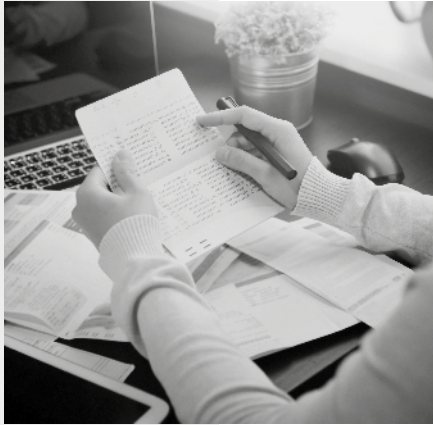
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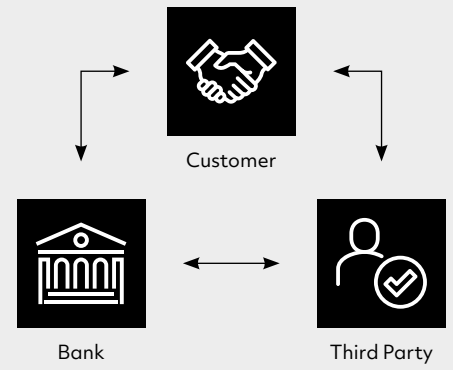
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What is Open Banking?



Open and banking sound like two words that shouldn't go together, with the traditional image of banks being a secure vault, so what is it?

The simple concept is that it's a way of giving customers more control of their financial data, more control of how they use their account and more control over which channels they use to manage their accounts. So, despite the word open, it's actually a concept based upon control and security and most importantly, with the customer really being in charge.

What does that mean?

In the next section we outline a series of ways that open banking is transforming how people and businesses access and manage their money. But before looking at the examples, let's just explore how it works.

If we take a simple example of a customer using a financial management tool to see and manage all of their accounts in one app, open banking is based on some simple concepts:

1. A customer may choose to use a **trusted** third-party service to access and manage their money. In some markets, these third-party providers (TPPs) are regulated by the local banking regulator.
2. The customer provides explicit **consent** to the third-party to access specified account information or to make a payment on their behalf.
3. The customer must also **authenticate** themselves and authorise the access with their bank so that bank can be sure it is the genuine customer
4. The third party can then access the customer account through **secure** APIs (application programming interface). These are technical interfaces that allow one system to connect to another.

So open banking is based on;

Trust

Trust is established between all three parties before anything happens

Security

This is all based upon best-in-class security standards, strong customer authentication and no passwords or customer credentials are shared at any point

Transparency

The customer is required to provide explicit consent, and at any point they can easily revoke it

Open banking is now a global phenomenon and is happening in markets around the world. It is transforming financial services and the rest of this paper will outline some of the examples where open banking is enhancing the customer experience, some global developments and what are some of the industry challenges for it to reach its full potential. ■

Open Banking Use Cases: An Introduction

Open Banking brings many opportunities for removing pain and enhancing the experience of the end user.

Open Banking solutions are targeted at consumers, seeking to fill a functionality gap when it comes to managing money. These often sit within a banking app and pull in data either from other banks or other third parties to create an aggregated view. This promotes customer satisfaction and loyalty by helping the consumer to keep on top of their finances with all the information in one place in an easy to read and understand format.

The same issue of customer centricity and service applies to SMEs and microbusinesses – a sector that has been largely ignored by retail banks. For a long time, this sector was considered too expensive to service and has been positioned within a retail offering. Open banking alongside technological advances, notably secure APIs and the cloud, have changed this, enabling banks to take an open-banking ecosystem approach and provide the customer with a single place to manage their business, using third party products and services that rely on data sharing.

In both cases, embracing open banking and creating ecosystems helps banks create a value-add user experience. This is important for banks and all those who serve clients no matter what their value. If a customer is not satisfied with service levels, ease of use and levels of personalisation, they can easily move to competitors. High street banks may still have the market share of customers, but they are



under pressure to retain them as those customers are enticed by the offerings of newer challenging this model. Such offerings tend to be digital-first, with an IT infrastructure that supports an ecosystem approach, cooperating with other data sources and enabling the free flow of information via APIs.

As open banking gains traction and an aggregated view of data becomes the norm, then the willingness to work with Fintech and other vendors and third-parties will grow. This will boost a nascent microservices and ecosystems approach within the banking industry, with collaboration between providers to offer a better overall service to end consumers and thus retain their business.

Through this approach, open banking will enable the bank to become the platform for a broader ecosystem, where its customers can select add-on services that rely on data-sharing. This will require the bank's own systems to coordinate and aggregate the multiple and disparate data sources and to be able to interpret and use this data for microservices solutions. Most importantly, it will need to present this coherently and seamlessly to the end user so that it addresses their problem and improves their experience.

The following use cases present examples of open banking products and services serving consumers, serving SMEs and micro-businesses and sometimes all those in payments value chain. ■

“ Open Banking brings many opportunities for removing pain and enhancing the experience of the end user.

Open Banking use cases that serve consumers

Use Case

Subscription payments management

Why is this needed?

Bank customers frequently set up subscription payments – or sign up for a free trial – and then forget about them. By the time a bank statement is looked at, the customer may no longer even recognise the payment. An obvious example is entertainment. The pandemic saw an acceleration in the popularity of digital subscription services such as Netflix, Amazon and Spotify. According to the Guardian, spending grew by 38% year-on-year to £2.9bn. By contrast, spending on physical entertainment fell – “UK consumers spent almost £150m less on physical entertainment products, such as buying and renting DVDs and CDs. Total sales of physical entertainment products fell by 10.7% last year, from £1.4bn to £1.2bn. The article states that in just a decade the physical entertainment market has shrunk by three-quarters, from £4.7bn in 2010”.¹

Beyond the entertainment industry, consumers are purchasing cars and even groceries through the subscription payment model. This trend is clearly skyrocketing, and it comes both with benefits and challenges for consumers and financial institutions alike.

For instance, cancelling or pausing a subscription can be hard to do and can take a long time. In the UK and the US, banks are mandated by the regulator to intervene and mediate these transactions in the name of consumer protection. However, this is time-consuming and costly, and if a customer cancels a subscription

payment through their bank, merchants may receive a payment block before they can engage with that customer again.

How does open banking improve subscription payments?

The connectivity gap between the bank, the consumer and the merchant can be solved using open banking technology and the concept of embedded finance. By providing subscriptions management software that sits within a banking app, consumers can see all their subscriptions and are able to cancel or pause the subscriptions themselves. Being able to self-direct and have control, the customer becomes empowered and more confident in using subscription services.

Key benefits to target market

- reducing customer support costs
- improving customer experience
- adding value to a bank's mobile app

Case study

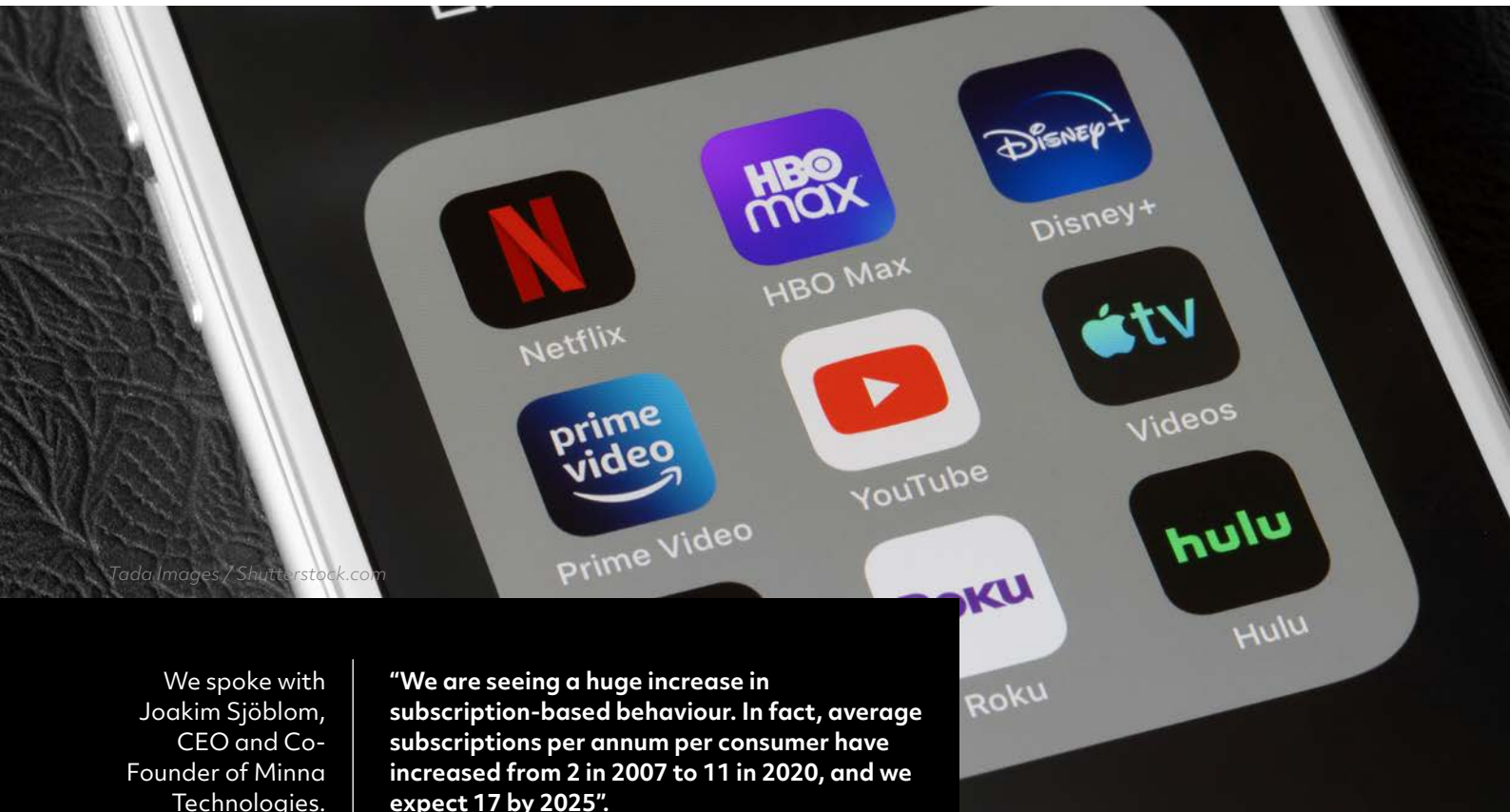
Minna Technologies offers a subscription management solution which is integrated with retail banks. This helps banks both reduce costs and differentiate themselves from their competitors.

Minna started as a Business-to-Consumer (B2C) proposition in 2016. In 2017, Minna was approached by a major Nordic bank which wanted Minna to integrate its functionality with their own so that the bank could offer it to their customers. In 2021, Lloyds Banking Group, a UK-based client of Minna Technologies, received around 100,000 calls each month for subscription services, creating an annual cost to the bank of more than £70 million for subscription calls alone. Lloyds Banking Group saw a 27% reduction in call volumes within the first three months of implementing the Minna Technologies open banking app.

Looking ahead, subscription-based behaviour is developing a ‘subscription economy’ and, interestingly, this could challenge future reliance on credit, such as when financing a car. This could have a major impact on the financial industry as a whole. Minna is looking to capture this area; it wants to be part of this transaction, acting as the rails between the merchant and the consumer.



¹ <https://www.theguardian.com/media/2021/jan/08/uk-lockdowns-fuel-record-year-for-home-entertainment-spending>



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We spoke with Joakim Sjöblom, CEO and Co-Founder of Minna Technologies. Watch the interview [here](#) or read the interview synopsis [here](#).



“We are seeing a huge increase in subscription-based behaviour. In fact, average subscriptions per annum per consumer have increased from 2 in 2007 to 11 in 2020, and we expect 17 by 2025”.

“The more subscriptions a consumer has, the more frequently they call the bank. If there were an app that enabled the consumer to manage their subscriptions themselves, they don’t need to call their bank. That’s a very big benefit.”

“Your banking app will show you all your subscriptions and recurring payments. If you wish to cancel one, we will conduct the cancellation on your behalf. This is the big IP behind Minna”.



The future

There has already been a huge increase in subscription-based behaviour and we expect the value of subscription management services to continue to grow, due to developing relationships between major subscription businesses and consumers and, of course, the open banking ecosystems to house them. Further value could also be added in the future by using information to add recommendations – for example, where an alternative, lower-cost supplier might be available.

More broadly, this is an example of the sort of added-value services that can be offered through bank apps, using an embedded finance approach. Banks will be able to deliver insights and build ecosystems around customer needs that go beyond simply providing financial services. This approach can help to reduce the risk of disintermediation, strengthening the bank’s position at the centre of customers’ financial lives. ■

Other companies in this space

As well as Sweden’s **Minna Technologies**, Denmark’s **Subaio** is also active in this space. As well as providing services direct to banks, Minna has partnered with open banking platform Bud in order to expand its reach.

Use Case

Product marketplaces

Why is this needed?

Consumers are faced with a bewildering choice of suppliers for many services, such as insurance and utilities. Many customers choose convenience over price, sticking with existing suppliers and often pay a loyalty penalty as a result. Comparison sites exist for many common services, but still

require effort by the individual to find appropriate alternatives.

How does open banking improve product marketplaces?

Open banking has the potential to make both comparison and switching easier, by using bank transaction information to recognise

the customer's regular expenditures and suppliers, it can recommend better deals. The aim is to transform traditional services like retail banking, money management and price comparison into more intelligent and personalised services. This is a win for the consumer but also for the bank which will be able to help their customers manage their finances more effectively, not just adding customer value, but also promoting financial wellness.

Key benefits to target market

- automatic identification of major costs and suppliers
- suggestions for alternative, lower cost suppliers
- potential for personalised comparisons – for example, based on the individual's location and energy usage



Case study

Snoop is an award-winning consumer-focused business that helps people spend, save and live smarter. The app uses secure open banking data and advanced analytics to provide data-driven, personalised insights ('Snoops') to help consumers find their biggest money-saving opportunities. The app can save the average household £1,500 each year. Since launching in April 2021, the business has gained significant momentum and was recognised by

the British Bank Awards for 'Best Innovation of the Year 2021'.

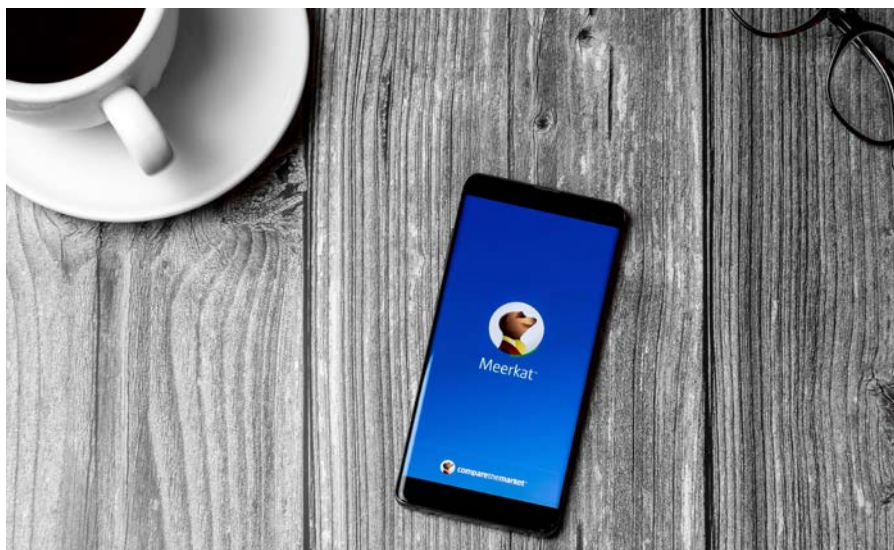
Once a user downloads Snoop, they can connect any bank account (using open banking) to aggregate and view all their accounts in one place. The budget planner puts every transaction into a category, identifying areas where money could be saved. The bill tracker analyses money management – checking how much bills are, when they are up

for renewal and where savings could be made. Customers can also view all balances and transactions in one wallet app with the smart spending tracker. In addition, the finance tracker adds personalisation by finding voucher and discount codes at the user's favourite stores. The app can also give a daily personalised feed of smart spending tips – daily balance alerts, weekly spending reviews, plus a weekly preview of upcoming bills.

Other companies in this space

The app **Snoop** uses open banking to analyse bank and credit card spending. The app can then offer intelligent insights, suggesting when switching supplier might reduce bills and identifying any discounts that might be available from existing suppliers. Established comparison websites are also aware of the potential of open banking. For example, **Compare the Market** has developed a 'Your bills' service that alerts users to potential savings.

Gary L Hider / Shutterstock.com



We spoke with John Natalizia, CEO and Co-Founder of Snoop. Watch the interview [here](#) or read the interview synopsis [here](#).



“We are a money saving, money management proposition aimed directly at the consumer.”

“Using secure open banking data and advanced analytics, the app provides data-driven, personalised insights (‘Snoops’) to help consumers find their biggest money saving opportunities. The app can save the average household £1,500 each year.”

“The key challenge for us and for the industry is awareness. We feel that the industry, including the major banks, need to get together with a coordinated approach to promoting the advantages of Open Banking for the consumer.”



The future

Firstly, open banking will modernise and automate the comparison site model. Users will no longer need to identify their costs or submit details of current suppliers and usage, as these can be pulled (or inferred) from bank transaction details. The next stage will be to automate the switching process itself, through the addition of a payment initiation service. This could evolve towards a fully-automated expense management service, allowing the consumer to take advantage of supplier competition with minimal effort. ■

Use Case

Personal financial management

Why is this needed?

Most individuals find it difficult to understand and manage their finances. Typically, an individual might keep an eye on their bank balance and perhaps try to set a little aside each month towards larger expenditures. Beyond this, tracking or forecasting using spreadsheets or more traditional budgeting software can be laborious and not attractive for busy individuals.

How does open banking improve personal financial management?

Open banking has allowed the development of sophisticated personal financial management (PFM) apps. These automatically pull in and analyse bank transaction data to provide an aggregated view across multiple accounts; helping to prepare budgets, control expenses and automate savings.

Key benefits to target market

- better cash flow management, reducing financial shocks and reliance on overdrafts
- expenditure analysis helps users understand their expenses and potentially reduce waste (such as unused subscriptions and 'loyalty penalties')
- increased propensity to save (by automated regular saving or rounding-up) leading to improved financial resilience
- greater chances of long-term financial wellbeing

Case study

Emma analyses a user's whole financial world. It can connect to bank accounts, cards, savings, cryptocurrencies and even pensions to give a holistic view of a user's finances by tracking and categorises spending across multiple accounts. This gives the user advanced insights into spending behaviour and thus allows for better awareness, management and ultimately, better financial wellness.

The Emma app relies on consented data sharing and this is important to customers who might worry that their personal data might be leaked or that they might inadvertently end up sharing data from one account to another.

The Emma app is also set to introduce additional elements like cashback, where customers receive money back for making purchases through the app. Alongside cashback, Emma has launched a 'Turbo Update' service, which provides real-time updates to customers about their account up to 4 times a day. This feature is supported by a true balance feature to forecast current account balance after fixed expenses are paid. This should allow for better budgeting when it comes to disposable income and contribute to overall financial wellness.

The future

PFM apps using open banking – focused on current accounts and cards – are largely concerned with improving short-term financial management. Most apps do relatively little to address an individuals' understanding of their long-term financial position, like their pension and retirement savings. However, as open finance develops, apps should be able to draw on other sources of data such as savings accounts and investments. This will give individuals a much fuller picture, and potentially make a significant contribution to addressing the long-term shortfall in retirement savings. ■

Other companies in this space

Other well-known PFM apps include **Money Dashboard** and **Plum**. Open finance platform **Moneyhub** offers a consumer app which allows aggregation across a broader range of financial products, such as savings and investments. Whereas, apps such as **Moneybox** and **Chip** focus on encouraging short-term savings (but provide less advanced financial management features).



Use Case

Personal debt management

Why is this needed?

Struggling with debts is a traumatic and confusing experience. Too often, debtor and lender are in opposition, as lenders try to recover as much of the debt as possible while debtors hope to protect what little they have. The time-consuming resolution process adds stress and increases lenders' costs.

How does open banking improve personal debt management?

Open banking allows the individual to share their income and expenditure automatically as part of the initial fact-finding stage. This information can then be used to work out a realistic debt repayment plan.



Key benefits to target market

- reduced paperwork burden as financial details are collected automatically
- improved trust between borrower and lender with greater confidence in the accuracy of information supplied
- a shared understanding of the individual's financial position
- faster resolution
- more likelihood of agreeing a fair outcome, avoiding legal action and potential bankruptcy

The future

Rather than waiting for debts to become unsustainable, lending products could be developed which incorporate regular monitoring of the borrower's accounts (with appropriate consent). This sort of approach also allows for loans with flexible repayments linked to affordability like 'gig economy' workers who have a varied and inconsistent income. Both regular repayments and any payments under a debt recovery plan could also be automated using open banking payment initiation. ■

Other companies in this space

Creditfix uses consented bank data (via Experian) to create a personal 'affordability passport' which can be shared with creditors and build personalised debt repayment plans.

Debt management technology provider **TIPTrust** includes open banking data collection as part of its solution for debt advisers. **Flexys** offers similar capabilities for lenders to use in its collections process.

Case study

OpenWrks uses open banking technology to help people in financial difficulty quickly pull together information from different accounts and sources and build an accurate digital income and expenditure statement.

The firm has partnered with Nationwide so their customers who are experiencing financial hardship can benefit from the technology. It uses data to build a picture of their financial situation prior to speaking to Nationwide's Collections and Recoveries' team. This can lead to a reduction in the time it takes for a member to get to the right outcome and reduces the potential worry and stress.

The solution uses conversational artificial intelligence and reductive logic. This gives the ability to create accurate and realistic income and expenditure statements online in minutes. As well as supporting customers through a difficult process, it also reduces the time advisors spend collating data and frees up time for them to give valuable advice.

As well as supporting Nationwide's members, OpenWrks is also working with expert advisors at the Money and Pensions Service to visualise customers' income and expenditure data – leading to more personalised and relevant advice.

OpenWrks is part of Nationwide's **Open Banking for Good challenge**, a £3 million fund that was designed to challenge Fintechs and organisations to work together to help improve the lives of those in financial difficulty using Open Banking technology.

Open Banking Use Cases that serve SMEs and other Businesses

Use Case

Account-to-account payments

Why is this needed?

As cash continues to lose market share, banks and card providers are at the heart of enabling timely and secure payments. Existing systems are highly effective but can have drawbacks such as the complexity and costs involved.

How does open banking improve personal debt management?

Open banking opens up the opportunity for new payment initiation services offering direct account-to-account (A2A) payments which have the potential to be faster, more secure and cheaper. The payer uses their familiar online banking interface to issue the payment instruction. The payment is then made – in the UK, typically using real-time banking payment rails.

Key benefits to target market

Open banking payments offer benefits to both payer and payee. For merchants and other payees:

- low-cost payment processing
- near instant receipt of funds
- confirmed payment with no chargebacks (unless separately agreed)
- reduced fraud levels
- potential to link with other services such as payments reconciliation or buy-now-pay-later (BNPL)

For consumers and other payers:

- fast, simple checkout or payment instruction – using the customer's familiar online banking interface
- improved security – for example, no credential-sharing
- immediate cleared funds where time is a factor
- a potential reduction in payment costs (where permitted by regulation)

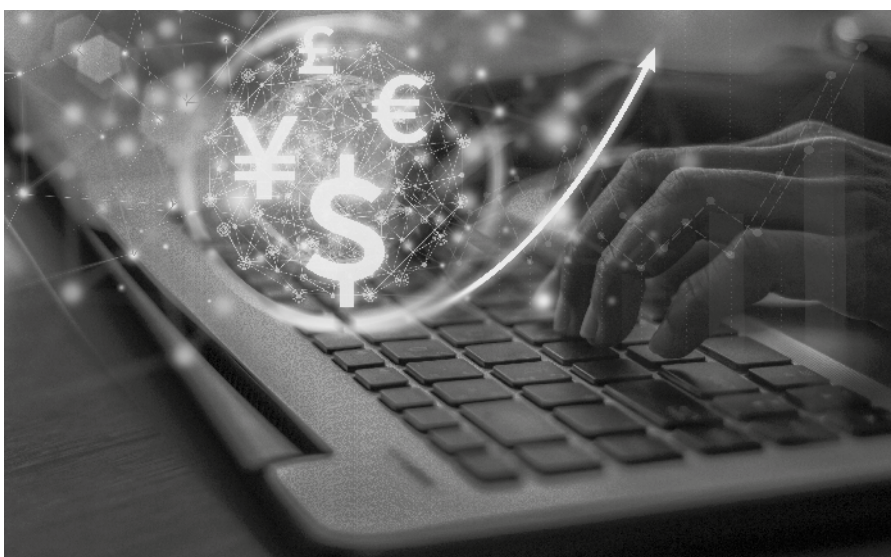
Case study

Open finance platform **Ecospend** is an open banking platform based in London. It launched commercial activities in late 2020 but hit the headlines in early 2021 when the company won the UK government contract to deliver an Account-to-Account payment system for HM Revenue & Customs. HMRC can now take tax payments using open banking, which is presented as another option alongside existing traditional methods.

Ecospend reduces the number of steps required to make an online payment. Card payments may have up to 15 steps, but an open banking payment has significantly fewer. This is because the consumer or the corporate making the payment is initiating a payment directly from their own bank account without entering card details.

Mobile transactions use biometric ID and desktop transactions use sensitive password information. In this way payments are both secure and speedy because they are running on The UK faster payments rails – i.e. funds clear instantly.

Payments costs are also reduced as there are no interchange fees or other card fees that are typically associated with card payments. This results in ease of use for the customer and a reduction in costs associated with admin and fraud.



We spoke with James Hickman, Chief Commercial Officer of Ecospend. Watch the interview [here](#) or read the interview synopsis [here](#)



“We are one of the leading players. We’ve built the systems. Our technology is proven. We are doing very large volumes of payments now with a number of our clients including the UK government”

“There are about 15 steps within a typical card payment. Within an Open Banking payment it is significantly less than that because all you’re doing as a consumer or a corporate bank account owner is that you’re initiating a payment directly from your bank account”

“I think we are all just scratching the surface at the moment. There are so many potentially ubiquitous channels through which we can build products and it is going to be exciting to be part of that.”



The future

Account-to-Account payments have been relatively slow to take off, but have the potential to take significant share across the payments market:

- **consumer to business** – such as bill payments, e-commerce purchases, subscriptions
- **business to business** – such as paying a supplier
- **consumer or business to government** – such as tax payments see case study with ecospend
- **consumer to consumer** – payments from one individual to another or between different accounts belonging to the same individual. Consumer adoption of open banking could accelerate as A2A payments become better known, particularly if concerns around consumer protection can be overcome.

The potential opportunity presented by Account-to-Account payments is perhaps best illustrated by Mastercard’s moves to acquire Finicity and Aiiia, and Visa’s acquisition of open banking platform Tink ■



Other companies in this space

Early leaders in providing open banking payments platforms include **Nuapay**, **Token** and **Trustly**. Other infrastructure providers such as **TrueLayer** and **Yapily** are increasingly moving into supporting open banking payments. Newer entrants continue to emerge. For example, **Volt** offers an open payments gateway, while **GoCardless** now allows businesses to collect recurring and invoice payments using open banking.

Use Case

Small business payments

Why is this needed?

Getting paid on time is a perennial problem for small businesses. Chasing and reconciling payments is a time-consuming and frustrating routine for most businesses that offer customers credit. On the other side of the coin, while the 'cheque run' may have been digitised, making payments can itself involve a significant administrative burden.

How does open banking improve small business payments?

Open banking has the potential to revolutionise small business payments – an area frequently underserved by banks in the past. Invoices can include a smart 'request to pay' link, offering automatic connection to a payment initiation service. Routine bulk payments can be automated.

Key benefits to target market

- request to pay encourages timely invoice payment, reducing time spent chasing overdue payments
- prompt, real-time payments improve cash flow
- improved customer experience
- reduced administration burden and costs, with automated invoice/payment matching
- reduced payment processing costs
- automation of bulk payments, reducing manual processing and errors



Case study

Open banking enabled payments platform **Ordo** was set up in 2018 by a team who previously worked at the UK's Faster Payments Service. It is an open banking enabled platform providing Payments-as-a-Service to a variety of companies from micro businesses, sole traders, and SMEs up to enterprise corporate clients. Customers can use Ordo to create a request for payment which contains all the details a customer needs and makes it easy for the customer to authorise the payment directly from within their own bank domain.

The solution is designed to be easy and quick; sign-up takes 3 minutes, and the solution asks only for the data that it actually needs. The customer connects an account to the service and once an invoice is raised, the platform creates a Smart Request. This is a

request for payment that includes the business' invoice reference, the amount, and the due date. The business can decide whether to allow the customer to ask for an extension to pay and whether they can part pay in instalments.

Having all in the information in the same place makes it easier for businesses to raise their invoices and for counterparties to pay them. A business can send invoices either by using the platform or by sending a secure link or QR code.

Within a few clicks the company receiving the invoice is taken to their own bank domain where Ordo has set up the payment for them and, providing the company wants to pay, and recognises the payment, and so on, they can authorise payment themselves within their own banking domain in the usual way.

We spoke with Fliss Berridge, Director and Co-Founder of Ordo. Watch the interview [here](#) or read the interview synopsis [here](#)



“We realised that we had the relevant payments and banking knowledge as we had contributed to the emerging idea of ‘request-for-payment’ whilst running Faster Payments, so we set up a company to build a request-for-payment service”

“Fintechs like us are providing innovative competitive services to businesses because the banks weren’t providing services to businesses, particularly SMEs who had been mostly ill-served by the banking market so far.”

“If you’re a SME, you are the entity collecting payments. You sign up and register with Ordo. That takes about 3 minutes - we’ve timed it. And we only collect the amount of data we absolutely need to provide the service.”



The future

As with other payment initiation services, adoption is at an early stage. As solutions mature and bank APIs become more reliable, the use of this kind of payment is expected to grow rapidly. Moves towards ISO 20022 standardisation will support the emergence of new use cases. Over time, linking payments with invoicing will allow further automation of small business accounting processes. Transaction capabilities will become embedded within accounting and ERP software. ■

Other companies in this space

Ordo enables a ‘request to pay’ service. Other companies in this space include Opayo, Trustly, Volante Tech, AccessPay and even large companies like Vocalink. The sector is very dynamic with both new entrants and existing organisations adding the capability to their offering.



Use Case

Credit scoring

Why is this needed?

Credit scoring plays an important role in supporting the flow of credit to individuals and businesses. Traditional approaches rely on credit bureau assessments and individual financial institutions' records of a customer's financial history. This restricts the flow of credit to unbanked and 'thin file' customers and produces credit scores that can lag behind their rapidly changing financial circumstances.

How does open banking improve credit scoring?

Open banking allows multiple data sets to be accessed and credit decisions to be based on a richer pool of data – across multiple accounts when available.

Credit scoring solutions rely on having as much data as possible to analyse. Open banking facilitates this by having API-enabled data flows that can then be used in an analytics aggregator. Once the data is 'crunched', it is translated into usable and meaningful end data points to drive deeper insight and facilitate real-time lending decisions to be made in consumer and commercial lending.

Key benefits to target market

- more automation of lending processes
- faster lending decisions
- more accurate risk assessment and reduced default levels
- the ability to extend credit to previously underserved groups of customers

Case study

Analytics business **AccountScore** operates a platform called 'consents. online'. The platform manages permissions that a consumer has given regarding their data and puts the consumer back in control. For credit and lending, this means that a customer can consent to – or deny access to – their data being used, allowing for a better decision-making process based on the broader availability of data.

This supports real-time lending decisions. Manual form-filling and data requests are replaced by direct access to transaction records. Assessments can be based on up-to-date information rather than backward-looking, historical data.

For example, consider a customer that has applied for an unsecured loan. There may not be enough data on the credit bureau or, as is now happening more frequently, the lender just wants more information.

Open banking enables the data to be shared across systems using APIs and the system then, in just milliseconds, gets the data, analyses it, and gets the resultant information back to the lender. The consumer gets that immediate benefit and using the portal can control future use of that data as well.





The future

Credit scoring based on open banking data, combined with machine learning, already claims to outperform more traditional approaches. As open finance and the data economy matures, adding in more data sources will allow increasingly rich financial profiles for even more sophisticated credit scoring. This should also make borrowing easier for people who have previously had difficulty accessing mainstream lending products. ■

Other companies in this space

Challenger credit bureau **Credit Kudos** is a leader in developing open banking products for lenders, including both consumer and commercial risk scores. It creates predictive insights by combining transaction and loan outcome data. Its purpose is to streamline underwriting and improve decision-making accuracy and timeliness.

We spoke with Emma Steeley, CEO of AccountScore. Watch the interview [here](#) or read the interview synopsis [here](#).



“The industry was using bank transaction data to underwrite lines of credit. It took us about three years to learn how to write a profitable line of credit because the raw data was just all over the place.”

“Banks are able to identify income more precisely, they are truly able to establish affordability, and they are able to make real-time decisions with verified information. When lenders first start with us, they are engaging marginal declines and finding that they can lend to them after all.”

“Lenders are very used to retro bureau data when they are looking to build their credit risk models. With Open Banking data that’s not possible. It’s consumer-consented data. You have to collect that data and learn as you go along.”



Use Case

Digital onboarding

Why is this needed?

For many industries, onboarding a new customer is a slow and laborious process. But establishing a customer's identity is essential to reduce the risk of fraud. Companies operating in regulated industries such as finance must meet 'know your customer' (KYC) and Anti-Money Laundering (AML) requirements to protect against money laundering and related risks. This requires a lot of data input and cross-checking and creates substantial pain points for banks and customers alike. In fact, customers are often asked for the same data point more than once and data is entered manually, while checks and verification take too much time and can suffer from human error. Consequently, the banks' onboarding processes are inefficient and costly, and the customer experience is far from smooth.

How does open banking improve digital onboarding?

Onboarding solutions use open APIs and, sometimes, robotic process automation (RPA), allowing banks to autofill several forms and gather data from both internal and external sources automatically. For example, a smart onboarding tool can gather both structured and unstructured data from public domains such as 'Companies House' to onboard and build customer profiles.

There are, however, some challenges. For example, financial institutions are resistant to sharing customer address details, citing GDPR privacy concerns.

Case study

Within wealth management, service and customer centricity are king. Private banks are focused on making sure that their onboarding solutions showcase their overall capabilities and give the client a taster of the sleek and easy-to-use digital system backed up by high-quality human relationships. Starting a relationship by asking time-pressed clients who are used to high levels of service in other areas of their life to fill out endless repetitive forms manually, taking weeks to check and upload data into the system is no longer acceptable.

Appway is one solution provider in this space. It enables leading wealth managers, private banks, and family offices to provide a personalised and high-quality experience to their high-net-worth

clients (HNWIs) while guaranteeing compliance to local and global regulations. The aim is to combine digital and physical interactions to ensure solutions are compliant while building trust with clients, nurturing a relationship where both sides are engaged.

CitiDirect's 'Digital Onboarding' is another example of a digital platform that simplifies and digitizes the onboarding experience for corporate clients. The 'Account Opening' process is now completed online from start-to-finish and progress is clearly tracked. Once a request to open an account has been made, the system automatically collects all required data and fills in the forms online. It also has an e-signature capability so that the client does not need to physically sign a document.

Key benefits to target market

- automation of onboarding processes reduces costs and delays
- reduced levels of 'drop off' during onboarding process
- improved customer experience and satisfaction levels

The future

While open banking data sharing can help automate onboarding, in most instances the data can only be used as part of the 'customer verification' process. If this can be solved with customers giving consent, then financial institutions can reuse data to maintain a better, holistic view of the customer going forward. This will enable a financial services company to provide a more personalised service simply because it knows more about a customer, their circumstances, motivations and so on.

Governments from across the world are also working to create secure and reliable digital identities, which might allow much simpler onboarding in

the future. With this in mind, banks will be well positioned to play a key role as trusted sources of identity verification in the future financial services ecosystem. ■

Other companies in this space

Open banking platforms like **DirectID** and **Yapily** offer customer identity verification as part of a range of services. The challenger banks are also ahead of the game when it comes to digital onboarding due to their modern digital platforms that are not weighed down by legacy systems and siloed processes.

Elsewhere, the rental sector is a leader in adopting smart onboarding. Platforms like **Canopy** and **Goodlord** use open banking as part of the tenant referencing process, providing evidence of personal identity and income.

Use Case

Small business financial management

Why is this needed?

Access to up-to-date financial information helps businesses manage cash flow, track financial performance and comply with tax and other regulatory requirements. Traditional solutions rely on labour-intensive bookkeeping, with transactions entered manually and periodic bank reconciliations used to track down errors. They can be clunky and costly for SMEs or microbusinesses.



How does open banking improve small business financial management?

Open banking allows a business to easily connect its bank accounts to its accounting system, so bank transaction details can be pulled into the accounting system automatically. The open banking connection is set to regularly check for any new transactions and can be asked to do so on demand.

Key benefits to target market

- improved cash flow visibility with near real-time updating, and an aggregated view of balances across multiple accounts
- a reduction in time spent keying in data, and fewer data entry errors
- more up-to-date financial reports
- faster, simpler bank reconciliation with bookkeeping entries automatically matched to bank transactions

Case study

Coconut is one of the newest providers in this space; the app connects to a business account to help track income, claim expenses and work out tax liabilities. The solution can also bring different accounts together and give a real-time, aggregated overview. There is an overview function which shows how much the business has earned, how much has been paid out and to whom, remaining liabilities, and therefore how much is left over to reinvest in the business or spend. Users can set spending rules and calculate how much to set aside for tax purposes, pensions, rainy day funds and even student loan repayments. The aim is to help the user understand how their business is performing month on month as well as over longer time periods as transactions up to two years old can be stored.

Other companies in this space

Unsurprisingly, small business accounting software providers such as **Xero** and **QuickBooks** have moved quickly to incorporate open banking functionality within their products. Another newer provider is **Tide** business banking – a business account with added accounting functionality.

The future

Looking forward, we can expect to see further connections between business banking and accounting functionality. An early sign of this trend is the Royal Bank of Scotland's (RBS) acquisition of FreeAgent's accounting software, which is now offered free to RBS' business current account customers. ■

Use Case

Banking without current accounts

Why is this needed?

Current accounts lie at the heart of most consumers' financial services world. For retail banks, the current account acts as a gateway, giving the bank a head start in offering other, more profitable financial services by virtue of both customer loyalty and the value of customer transaction data. Offering current accounts requires huge investment in core technology and compliance and their profitability has deteriorated, particularly in the current low interest rate environment. It's also worth noting that in the UK consumers are not charged for Faster Payments or Direct Debits, so the banks bear the cost.

How does open banking improve banking without current accounts?

Open banking allows 'challenger banks' to bypass the need for current accounts. These banks use account aggregation to use customers' existing current accounts at other financial institutions. This allows companies to offer the more 'profitable' parts of a banking relationship i.e.,

savings and lending, whilst leaving the unprofitable piece – current accounts – with the old bank.

Key benefits to target market

- faster, lower-cost launch of new 'challenger bank' propositions
- reduced compliance burden
- ability to attract new customers without requiring switching existing provider
- freedom to 'cherry pick' profitable services

The future

The ability to offer tailored banking services without current accounts opens up the possibility of a more competitive consumer banking market. Challenger banks will be able to launch quickly and with lower funding requirements. In the future, adding payment initiation services could allow their customers a fuller banking experience – while still retaining their existing current account. The challenger has the opportunity to become, in effect, the customer's primary bank, while their existing provider is reduced to a role behind the scenes. ■

Case study

Monument Bank was set up to meet the unmet demands of affluent clients in the UK. The bank offers entirely digital lending journeys of up to £2 million. Its target market is those with a personal net worth of between £250,000 to £5m (excluding their main residence) – principally professionals, property investors and entrepreneurs. It has identified 3.5 million people in the UK within this bracket, to whom it will offer savings accounts and bridging loans of up to £2m.

Unlike other banks, which often reserve the best deals to attract new customers, Monument says it will reward customer loyalty; those who repeat a fixed-term savings account or renew a loan will get a better rate than a new customer. The bank has been granted an 'authorisation with restrictions' UK banking licence, with a limit to how much business it can take on until it is fully operational.

Other companies in this space

The UK's best-known and longest-established challenger banks – Monzo, Starling and Revolut – all offer their own current accounts. There are, however, newer entrants that have yet to launch which plan to offer banking without current accounts. As well as Monument, **Pennyworth** and **JN Bank** which also both aim to target more affluent customers while only offering saving and lending products. They will do this by offering high levels of service and engagement, but only on the products that make them money. With no need to offer current accounts, they can ensure that they focus their efforts on their profitable products with no need to subsidize to unprofitable current accounts.

Global Developments in Open Banking

Regulatory and market-led

Open banking has developed into a global movement.

In many markets, such as the European Union, open banking is led by regulation. Often, governments see open banking as a way to stimulate competition and innovation in financial services. Further, in emerging markets in particular, open banking is seen as having the potential to deliver financial inclusion.

This sort of regulatory push may be linked to wider moves to encourage the development of a data

economy, alongside regulation that gives consumers greater privacy rights and control over their data.

Market participants are also pushing the trend towards open banking, in both regulated and unregulated markets. Banks are moving towards more agile, platform-based business models and technologies, underpinned by APIs.

Customers have become accustomed to digital services and now demand greater convenience and more personalised experiences.

Despite some early reticence, many banks are now embracing the



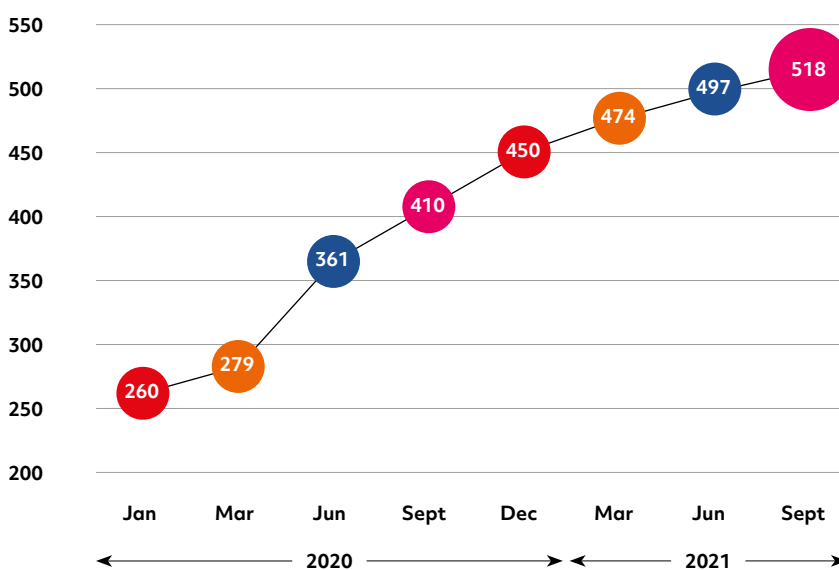
Banks are moving towards more agile, platform-based business models and technologies, underpinned by APIs.

opportunity and seeing the benefits an API powered open banking model can bring, including;

- serving their customers more effectively, in the channels they wish to use
- reducing costs to serve, by enabling customers to increase their use of digital channels to manage their account
- enabling more rapid innovation and the development of partnerships
- distributing products and services to customers they may not traditionally reach through their own channels

As a consequence, we have seen a huge upsurge in partnerships between banks and fintechs, working together to accelerate innovation and serve customers more effectively.

Third-Party Provider growth from January 2020 to September 2021 (EEA & UK)



Q3 2021 Konsentus Third-Party Provider Open Banking Tracker



Europe

Open banking in some form – the sharing of customer financial data, with the end user’s consent – has existed since the introduction of online banking. Modern, open banking, as described in this paper is generally dated back to the introduction of the second payment services directive (PSD2). This came into force on 13 January 2016, with member states given two years to transpose it into national law.

PSD2 aims to create an integrated and efficient payments market across the European Union by encouraging competition and the emergence of new players.

In February 2021, the European Banking Authority called on



national authorities to ensure that banks remove any remaining obstacles preventing third party providers accessing payment accounts.

The reasons for the existing obstacles are varied.

Whilst PSD2 is an EU-wide directive, its interpretation and enforcement takes place at a national level. This means implementation timescales and enforcement have not been consistent across Europe.

At the same time the implementation has not been coordinated and there have been no common standards mandated. This has resulted in a number of standards emerging as well as banks implementing proprietary API standards, all making connectivity to banks a challenge for third parties.

Finally, from the perspective of financial institutions, attitudes have been mixed with some seeing open banking as a threat alongside some smaller banks, seeing open banking as an additional cost rather than something that will deliver real immediate benefits to them or their customers.

As a consequence of these challenges the landscape is still developing, and the emergence of a harmonised European open banking market is still at an early stage.



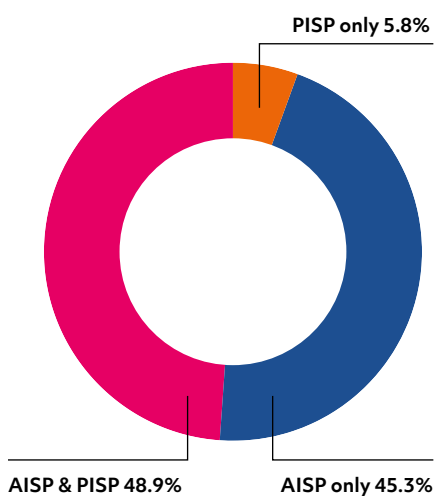
The UK

In the UK, the Competition and Markets Authority (CMA) launched an investigation into the retail banking market in November 2014. As a result, in August 2016 the CMA issued an order requiring the UK’s nine leading payment service providers – the so-called CMA9 – to allow third party providers access to customer transaction data.

The implementation approach in the UK was markedly different than the rest of Europe as a result of the CMA Order. An Implementation Entity was formed and led the development of the UK Open Banking Standard and provided services and support for a coordinated implementation.

The standards were mandated for the 9 largest and have been almost uniformly adopted by other UK banks. The combination of common standards and an earlier implementation has enabled the UK to take a lead on the rest of Europe in terms of open banking maturity. The UK Open Banking Implementation entity reports monthly API call volumes at consistently over 800m per month with over 4 million regular users of open banking-based services.

Services TPPs regulated to provide (EEA & UK)



Q3 2021 Konsentus Third-Party Provider Open Banking Tracker



North America

In the absence of regulation, the industry has developed its own standard for user-permissioned data sharing via the Financial Data Exchange (FDX). In September 2021, FDX reported well over 20 million North American consumers now use services enabled by this standard.

The 2010 Dodd-Frank Act included section 1033, which gave the Consumer Financial Protection Bureau (CFPB) the power to issue rules requiring financial institutions to share consumers' data on request. Progress has been slow, with the CFPB not issuing an Advanced Notice of Proposed Rulemaking until 2020.

In July 2021, President Biden issued an Executive Order promoting competition, that includes language many believe lay the groundwork

for open banking in the US. The order "Encourages the Consumer Financial Protection Bureau (CFPB) to issue rules allowing customers to download their own banking data and take it with them". One of the key aspects of open banking is that consumers own their data and not the financial institution. This has given fresh impetus to the introduction of open banking regulation.

Canada launched an open banking review in 2018 with the final report published in August 2021. This proposes the introduction of an initial regulated open banking system by January 2023.



Latin America

Mexico was the first country in Latin America to start developing open banking regulations, as part of the 2018 Fintech Law. With



One of the key aspects of open banking is that consumers own their data and not the financial institution. This has given fresh impetus to the introduction of open banking regulation.

the first rules published in 2020, financial institutions are not yet required to share transaction data with third party providers. When implemented, the regulations are expected to also require Fintechs to share their data, enabling data to flow to as well as from banks.

Brazil's central bank approved the introduction of open banking regulation in 2019, and has since made rapid progress despite delays caused by the pandemic. Phased implementation began in 2021. The third phase, which includes the introduction of payment initiation, is scheduled for the fourth quarter. In 2020, the central bank also introduced the PIX instant payments system.

Elsewhere in Latin America, Chile has announced plans to introduce an open banking standard. Columbia has also plans for open banking, but with participation on a voluntary basis.





Australia and New Zealand

Australia's open banking regulation, the Consumer Data Right (CDR), was introduced in 2017. Like the UK, the regulation was partly driven by competition concerns, with Australia's 'big four' banks required to share data from July 2020. This was extended to non-major deposit-taking institutions from July 2021.

Unlike many other markets, from the outset Australia's CDR has envisioned an extension to cover finance more broadly and other sectors, including energy and telecommunications.

New Zealand's government has announced its intention to introduce a similar Consumer Data Right.



Asia

Asian countries are taking a wide variety of different approaches.

India's rather unique, hybrid approach does not include an open banking regulation as such. The government has, however, supported the development of the financial ecosystem and the underlying technology framework – the India Stack – including Aadhaar digital identity and the Unified Payments System (UPI). In September 2021, India launched



China's market-led open banking has seen the emergence of a number of 'super app' platforms, combining payments, merchants, messaging and more.

the Account Aggregator system to allow customers to share their financial data.

China's market-led open banking has seen the emergence of a number of 'super app' platforms, combining payments, merchants, messaging and more. However, 2021 has seen the Chinese government move to reassert control over data flows, introducing both privacy and data security laws.

Markets such as Singapore, Hong Kong, Japan and Malaysia have introduced open banking frameworks, but not always with full open banking regulation. For example, Hong Kong's banks are required to develop APIs but can restrict access to their chosen partners. South Korea has an open banking platform that allows access to accounts held at different banks. The Philippines approved new open finance regulation in June 2021.

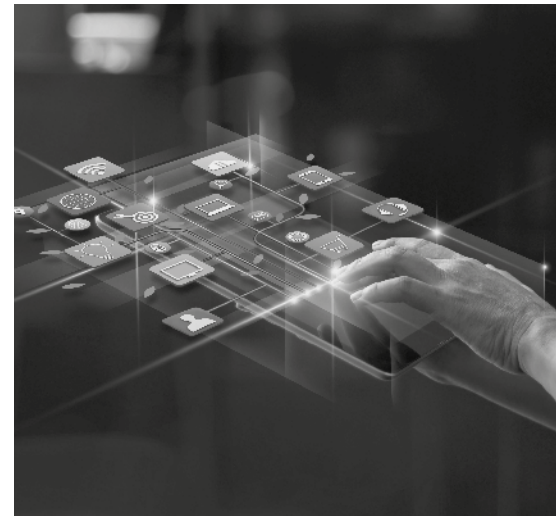
Other markets

In the Middle East, Bahrain issued an open banking framework in 2020. The Dubai Financial Services Authority started issuing AISP and PISP licences in April 2020, while Saudi Arabia plans to introduce open banking in 2022. Israel has also announced plans for open banking reform.

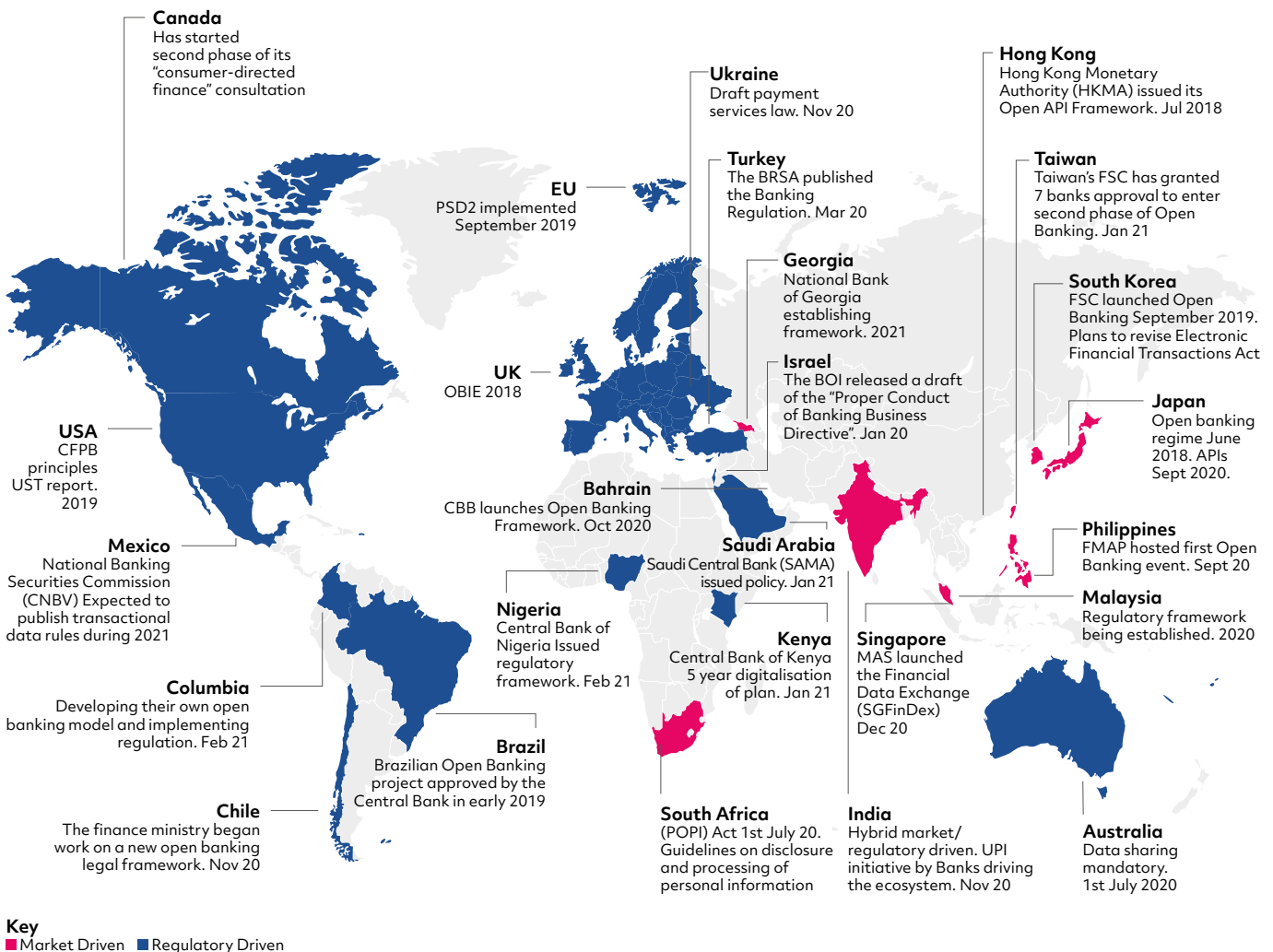
Nigeria is setting the pace in Africa, with the Central Bank issuing a regulatory framework in February 2021.

European markets outside the European Union are also taking steps towards open banking regulation. Georgia published an open banking standard at the end of 2020, with the first phase implementation deadline in March 2021. Ukraine adopted a Payment Services Law in July 2021, largely based on PSD2, the same month that the first banks started using Russia's open banking API.

Open banking remains at various stages in other markets, and regulation, if any tends to be at an early stage. ■



The world of open banking



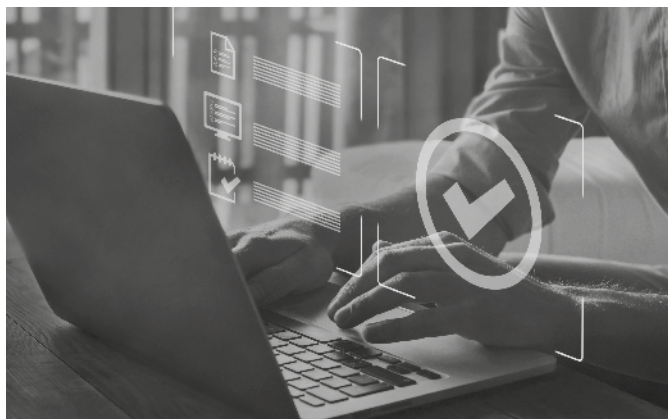
Standards and specifications

When it comes to technical interfaces, standards are always beneficial. You only need to think about the challenges of travelling with electrical items across different countries and how many adaptors are needed. Now imagine if every manufacturer came up with their own plug design.

This is the same with open banking APIs. An open banking standard is a set of technical specifications and guidelines, which may include;

- **Security profile** - forms the foundation for any open banking / open finance standard and defines how authentication, consent and ongoing access are managed between users, third parties and banks
- **Functional specifications** –define the data structures and user flows to ensure that account information and payment initiation data is presented in a standardised way
- **Customer experience guidelines** – a set of guidelines and principles to ensure the user experience is consistent and avoids unnecessary friction
- **Operational guidelines** – a set of guidelines to create a framework for interaction between participants.

Having a standard makes it easier for all participants to operate in the open banking ecosystem, helping to reduce technical workloads and costs.



While PSD2 set out a framework for open banking across the European Union, it did not create an open banking standard. The Regulatory Technical Standards, as the document was called, was neither technically detailed nor a prescriptive standard. The overall approach of the EBA was to create a framework and allow anyone to create their own standards within that framework.

As such we have seen a number of standards created within Europe, such as STET and Berlin Group – in total there are more than half a dozen. Further, the regulations make it clear that a financial institution does not need to align to any particular standard. As long as their APIs are fully open and meet the other PSD2 requirements such as data security companies can create their own solutions.

As mentioned earlier, the UK opted to create the Open Banking Implementation Entity (OBIE) to develop and manage the open banking standards for the nine largest banks. This has now spread wider, with the majority of other UK financial institutions voluntarily using the standards.

Naturally, standards that aim to achieve similar objectives will have much in common. For example, many standards globally make use of the Financial-grade API (FAPI) security framework pioneered by the OpenID Foundation.

Different standards and specifications mean that the technical implementation of open banking varies from one market to another. Even if banks are using the same standard, the standards are not entirely prescriptive – for example, different banks will take different approaches to authentication methods

In practice, the number of banks and the differences in implementation can create significant technical challenges for third party providers who wish to connect to multiple banks, particularly in different markets. Aggregators such as Tink or Plaid have become important intermediaries, offering third parties a single API to connect to multiple banks, whilst companies like Token and Ozone have created front-end API for financial institutions that deliver an easy, off the shelf solution. ■

Outlook

The global momentum of open banking is undeniable, but it is still relatively early in the journey. As open banking adoption scales and the scope of bank APIs moves beyond the minimums required by regulators there are some challenges that will need to be tackled by the industry.

The first of these challenges is how to ensure this is based on strong, interoperable standards. Each new market appears to be learning from the shortfalls of previous approaches and are increasingly mandating the use of standards by banks. However we are seeing a fragmentation of standards with new variants emerging market by market.

Whilst many are based on the same core security standards, such as the Open ID Foundations FAPI standard, that determines how trusted connections are established and consent and access is granted. The risk exists that the variants will diverge, rather than converge. To drive ever increasing interoperability, coordination of global standards development and market approaches is required.

A second challenge is how to scale the market beyond the initial regulatory scope which has acted as a great catalyst. We're seeing adoption grow, but the real potential will be unleashed as banks make more functionality available through APIs and start to view it as a strategic channel to enhance customer experience, develop new partnerships and propositions and reach new customers and markets.

In the UK, variable recurring payments is perhaps the first "premium API" that the industry has high expectations for. This is functionality that could enable truly intelligent, embedded commerce and frictionless account to account payments, but it's not just a question of switching it on. The industry needs to determine the answers to questions like "what is the commercial model to ensure balanced incentives?", "how can it be scaled efficiently (a complex web of bilateral agreements or something more coordinated)?", "how does the dispute and liability model work?" The Payments Association explored these questions in a recent podcast '**VRP Part 2: Where are we on this revolutionary open banking payments journey?**'



The industry is also starting to work through these questions through working groups such as the UK Finance Open Banking Payments working group, whilst in Europe there is an intention to create a new SEPA API scheme. A likely scenario is that partnerships between banks and third parties may form in advance of and perhaps help inform a more coordinated industry approach.

Finally, a third challenge will be the consideration of how open banking extends to open finance and a potential broader open data ecosystem.

Open banking is establishing a strong foundation of secure, consent-based data sharing through common technical standards. This should act as the foundation for broader open finance initiatives as there is far more that is the same, than is different when we consider how to securely enable data sharing across industries.

However, the obvious answer can sometimes be complicated by other factors. As we look across the finance landscape there are multiple regulators, some of which may choose to do things differently risking fragmentation. Whilst the question of data reciprocity will become ever more important, particularly if some organisations gain an advantage through accessing the customer data held by other organisations, yet do not need to meet the same obligations themselves.

Whilst there may be others, these are some of the themes and challenges we expect to be prominent in industry debate in the coming years. ■

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About The Payments Association

The Payments Association (previously the Emerging Payments Association or EPA) is a community for all companies in payments, whatever their size, capability, location or regulatory status. Its purpose is to empower the most influential community in payments, where the connections, collaboration and learning shape an industry that works for all. It works closely with industry stakeholders such as the Bank of England, the FCA, HM Treasury, the PSR, Pay.UK, UK Finance and Innovate Finance.

Through its comprehensive programme of activities and with guidance from an independent Advisory Board of leading payments CEOs, The Payments Association facilitates the connections and builds the bridges that join the ecosystem together and make it stronger. These activities include a programme of monthly digital and face-to-face events including an annual conference, PAY360, the Emerging Payments Awards dinner, CEO round tables and training activities. The Payments Association also runs five stakeholder working project group covering financial inclusion, regulation, financial crime, cross-border payments and open banking. The volunteers in these groups represent the collective views of the industry and work together to ensure the big problems facing the industry are addressed effectively. The association also conducts original research which is made available to members and the authorities. These include monthly whitepapers, insightful interviews and tips from the industry's most successful CEOs.



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