



Open Opportunities with **Open Finance**

Whitepaper in **collaboration with AWS**



Over the past few years, the idea of Open Finance has gained popularity in the financial services sector. With its ability to enhance the consumer experience by giving the end consumers more control over their data, and enabling them to access a wider range of financial services and products across providers; Open Finance holds the possibility of revolutionising the financial services sector.

However, banks must put in place a composable architecture to support Open Finance not only at the front-end integration layer but also in the back-end Core Banking System (CBS). The single source of truth, the Core Banking System, contains a key portion of the customer relationship and account information. This information is used across the asset and liability products for customer service, marketing, decisioning, regulatory compliance, data monetization, etc. Given this requirement, it is crucial to have an architecture that can facilitate to:



Securely expand the CBS data-sharing



Increase the capability of the business or domain



Ensure that customer consent is obtained



Enable complementary services to collaborate together to serve a customer



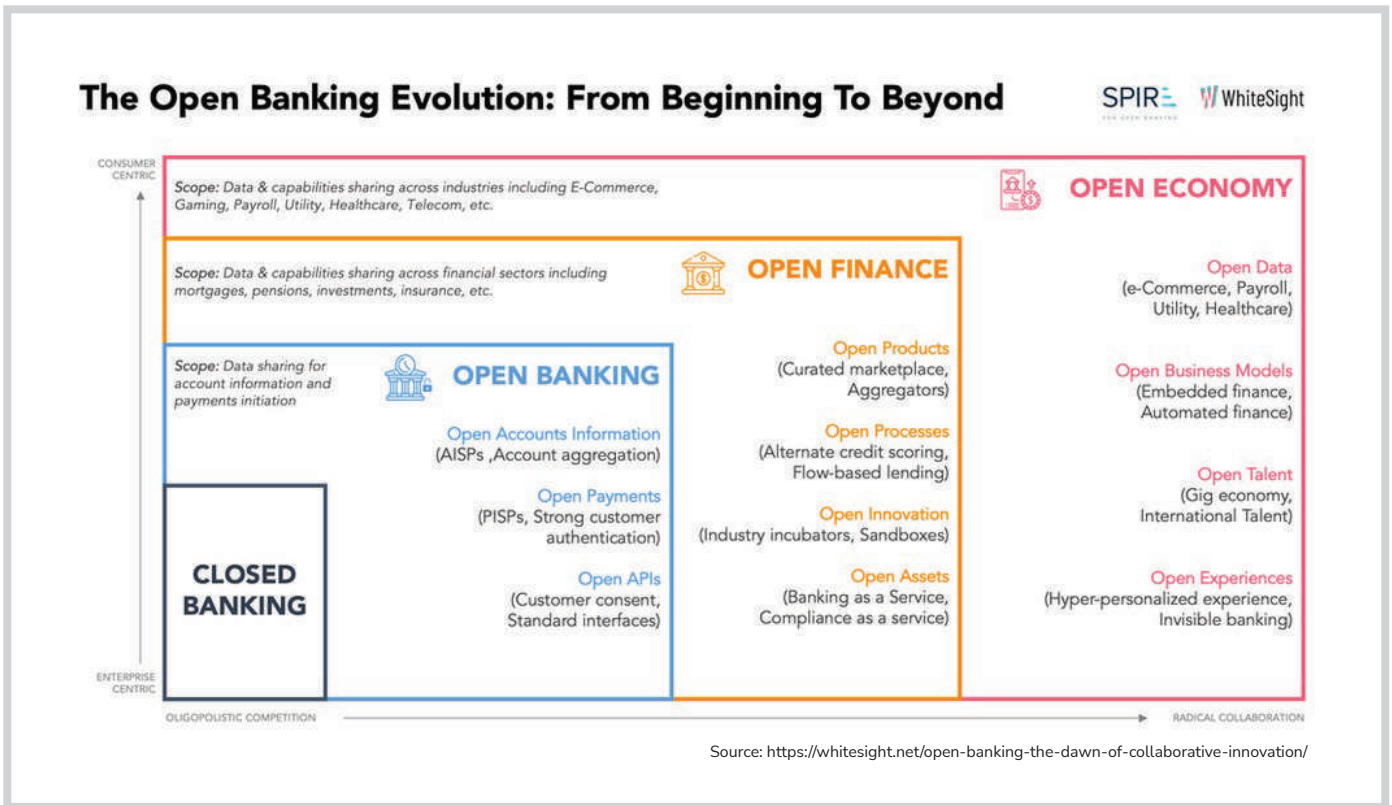
Give customers the power to make competitive decisions

What is Open Finance?

With the primary goal of developing open, common, harmonised, and scheme & processor-independent standards in the inter-banking area, Berlin Group developed the notion of Open Finance. Open Finance enables financial institutions, Third Party Providers (TPPs), and other eligible entities to provide improved services, products, and data that will benefit industry players and increase customer experiences.

In contrast to Open Banking, which focuses on the interchange of transactional data &

services between banks & third-party providers (TPPs), Open Finance shares the customer's whole financial footprint in addition to the data that is already available at the bank. For more individualised customer service for payments and other financial products, this information on non-banking financial services is given with the customer's consent to a dependable third party. Examples of information shared include pension data, taxes, insurance, KYC, and many other items.



Open Finance API framework

With PSD2, the European Union has published a directive on payment services in the internal market. Among others, PSD2 contains regulations on services to be operated by so-called Third Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU). These services¹ are:

PAYMENT INITIATION SERVICE (PIS) to be operated by a Payment Initiation Service Provider (PISP) TPP as defined by article 66 of [PSD2],

ACCOUNT INFORMATION SERVICE (AIS) to be operated by an Account Information Service Provider (AISP) TPP as defined by article 67 of [PSD2], and

CONFIRMATION ON THE AVAILABILITY OF FUNDS SERVICE (FCS) to be used by a Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2]

To implement these services, an interface has been defined in the Berlin Group called NextGenPSD2 XS2A Framework. This XS2A Framework is now extended to premium services and developed into a Version 2 API family. This interface is addressed as openFinance API.²

The ability of the bank to win over the public's trust and reassure them of the security and dependability of sharing their data is essential to the success of Open Finance. The following important security measures have Open Finance implementation recommendations to help with this topic:

- Protocols to use (OAuth2, TLS, HTTPS)
- Security frameworks to adopt (PKI) for safe message exchange
- API response code mapping & management
- Error & exception management

Open Finance can open many opportunities for banks

BENEFITS OF OPEN FINANCE FOR BANKS



**NEW
REVENUE
STREAM**



**INCREASED
CUSTOMER
ENGAGEMENT**



**IMPROVED
OPERATIONAL
EFFICIENCY**



**ENHANCED
RISK
MANAGEMENT**



**ACCESS
TO NEW
MARKETS**

NEW REVENUE STREAM

With the help of Open Finance, banks can supply their customers with a wider choice of financial services and goods, including those provided by outside vendors. For banks, this might result in new additional revenue streams. The end customer benefits from complementary solutions from partners, system integrators, or even bank competitors.

INCREASED CUSTOMER ENGAGEMENT

The involvement and loyalty of customers can be raised by banks by providing a greater choice of financial services. They can utilise Open Finance to better understand the customer data and provide customers services that are better suited to their needs. These services can range from contextual cross-sell offers to a personalised super app experience.

IMPROVED OPERATIONAL EFFICIENCY

Banks may automate a lot of their procedures by integrating with third-party service providers, which lowers costs and boosts operational effectiveness. This could include processes in account opening like KYC, Document reading, or risk analytics for lending.

ENHANCED RISK MANAGEMENT

Banks may have easier access to data through Open Finance, which they can utilise to enhance risk management and lower fraud. Banks can use their expertise in fields like compliance and cyber security by collaborating with third-party companies.

ACCESS TO NEW MARKETS

By collaborating with regional vendors or making their services available to customers worldwide, Open Finance can help banks enter new markets and geographical areas. With partners offering complementary products and services, opportunities for those with a licence for only one or a few asset/liability solutions can grow and extend, offering full customer service and strong retention rates.



By July 2022, Brazil had reached **5 million Open Finance consents and 700 million API calls**. It took 11 months for Brazil to reach the 1 million mark. On the other hand, it took 12 months for the UK to reach one million consents.³

India is another example of the willingness of customers to share information to achieve a better banking experience. **In 2016, RBI, released guidelines for a new class of NBFC entities called Account Aggregators (AAs), mandated to operate as a consent manager for Indian citizens for sharing data.** The data can be shared digitally in real-time, directly from the existing financial services provider to the potential financial services providers. Having started in 2021, AAs had fulfilled 40.9 Million requests by December 2023.⁴

There are some **challenges ahead...**

Banks have a lot to gain from Open Finance, but there are also a lot of challenges to overcome and factors to take into account if they are to be successful.

KEY CHALLENGES FOR BANKS WHILE IMPLEMENTING AN OPEN FINANCE STRATEGY



Data governance and privacy are two major challenges on account of the emerging regulations. Banks must make sure they have reliable data governance structures in place to safeguard customer information and adhere to pertinent laws like the GDPR. To enable the secure exchange of data with third-party providers, they must also make sure that they have the proper frameworks for data sharing and consumer consent in place. **Technology providers like iGCB (Intellect Global Consumer Banking) offer country-ready Open Finance enabled platforms that address security issues via user and role-based control authentications, information security while sharing data to third parties, smart triggers to capture any irregular transactions and more.**

Competition from fintechs and other third-party providers is another issue. Banks run the danger of losing their customers as the Open Finance ecosystem develops and they work with third-party suppliers more frequently. To reduce this risk, banks must work with third parties to provide cutting-edge products and services while still making sure they have solid customer relationships. **Today technology providers like iGCB can accelerate collaboration with third parties for use cases ranging from KYC, Payments, ESG, PFM, Food & Travel and more.**

The requirement for an adaptable and agile IT infrastructure is another factor. Banks must be able to quickly adapt to new technology, business models, and customer requirements to participate in Open Finance. To do this, banks must switch to a completely composable, cloud-native banking platform that offers high availability, automated workflows for speedy service, and simple integration of new features and services.

Open Finance use cases are realized on the distributed architectures and leverage the principles of distributed banking functionalities across the banking value chain. APIs act as the digital bridge facilitating the safe exchange of financial data allowing highly-personalized and customer-centric financial services offering. As Open Finance becomes integrated into digital ecosystems across industry boundaries and moves towards an open data economy, banking gets subsumed into cross-industry digital ecosystems through innovative business models **warranting a highly secure, always available, scalable, flexible, collaborative and cost-effective IT infrastructure. Cloud is an ideal infrastructure platform for hosting such applications. Amazon Web Services (AWS) – a leading Cloud Service Provider globally has multiple services that can cater to Open Finance requirements.**

OPEN FINANCE SERVICES OFFERED BY AWS

Customer Experience



AWS Mobile



Amazon Pinpoint



Amazon Sagemaker

Monitoring, Reporting & Control



AWS Cloudtrail



Amazon CloudWatch



Amazon QuickSight

Open APIs



Amazon API Gateway



AWS Lambda



Amazon EKS

Data Lakes & Analytics



Amazon S3



Amazon Redshift



Amazon Kinesis

Infrastructure



Amazon EC2



Elastic Load Balancing



AWS auto scaling

Identity & Access



AWS Identity & Access Mgmt



AWS Secrets Manager



Amazon Cognito

Data Protection



AWS CloudHSM



Amazon CloudFront



Amazon Made

DDoS & Encryption



AWS Shield



AWS Key Mgmt Service



Data Encryption Keys

Image Source: AWS

Cloud - An important enabler for Open Finance



The benefits of cloud computing for banks are many, including new models of ownership, flexibility to scale operations, quick innovation, faster processing speed, real-time updates, increased speed to market, improved efficacy to the emerging technology and effective collaboration. Today cloud service providers like AWS can not only support the realisation of the Open Finance use cases for improved efficiencies in Identity verification, personal finance management, loan eligibility, insurance premium, payment reconciliation, etc. but also spurt innovations in security (authorization and authentication), hyper-personalisation, credit assessment (using alternate data sources), geospatial analytics for loan origination/ monitoring and insurance, green banking, IoT based solutions (toll card, Pay per drive insurance, etc.), customer service (Generative AI) and beyond banking offerings.

Decoding the Open Finance Strategy

Banks must take several actions to develop a successful and effective Open Finance strategy.

CHECKLIST - OPEN FINANCE STRATEGY ADOPTION FOR BANKS

- Are my platforms built on a composable architecture?
- Do my APIs adhere to the technical and security requirements of the regulator?
- What is my strategy to collaborate with Fintechs & other third parties?
- Are my products following the required frameworks for customer permission and data sharing?
- Is my Open Finance Strategy customer-centric?

First, they must make sure that the architecture of their financial platforms (core banking, lending, digital banking etc.) is fully composable.

Banks may modularize their systems and services thanks to composable architecture, which makes it simpler to add new products and services via APIs. This may enable banks to provide their customers with more individualised and cutting-edge financial products and services.

For example, By providing a special loan option for a particular income group that they do not already serve, a bank hopes to expand the size of its addressable market. The bank can work with a Fintech that has a suitable product and offers the loan to its consumers with the aid of an Open Finance enabled lending platform with searchable APIs.

Second, banks must ensure that their APIs adhere to the technical and security requirements set forth by authorities.

This includes making sure APIs are dependable, secure, and able to manage heavy traffic. To safeguard customer data and adhere to applicable legislation, banks must also make sure that they have the required frameworks for data governance and risk management in place.



Third, as was already noted, banks must work with fintechs and outside providers to create new financial services and products. Banks can gain access to fresh sources of innovation and knowledge by collaborating with fintechs, startups, and other third-party providers. This can save costs and increase operational effectiveness for banks, enabling them to offer more appealing products and services to their customers. The handling of personal finances is another instance of this partnership. Banks can collaborate with PFM-focused third parties and use the data in their mobile apps. However, banks need to think about putting in place the necessary infrastructure to give APIs (such as the API Exchange platform) proper security, governance, and operational controls that are linked to business goals/objectives.

Fourth, in accordance with the GDPR data governance requirements, **banks must make sure that they have the required frameworks for customer consent and data sharing in place.** In addition to ensuring that consumers have the opportunity to govern the data they share, this entails giving customers clear, transparent information about how their data will be used and shared.

Finally, **banks must approach Open Finance from a customer-centricity perspective.** By placing the customer at the centre of the Open Finance experience and creating products and services that cater to their requirements and preferences, this is accomplished. Banks may strengthen their

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relationships with consumers and raise overall customer satisfaction by putting the customer first. Customers who are concerned about their carbon footprint, for instance, can authorise third-party services to assess the effects of their purchases and obtain a customised, real-time carbon footprint from their bank for each transaction. Here, Open Finance supports the customer's transition to a greener future.

In conclusion...

Banks have a huge potential with Open Finance to promote innovation, cut expenses, and increase customer involvement and loyalty. Banks must adopt a Core Banking system based on composable architecture to take advantage of this potential. This system must allow banks to swiftly and inexpensively integrate new capabilities and services while still guaranteeing regulatory compliance and a focus on customer demands and preferences.

Success will depend on partnering with third-party providers, making investments in talent and skills, and fostering an innovative culture. Equally important will be a focus on data governance and privacy, trust and openness, constant monitoring, and adaptation. Banks can take the lead in the development of the Open Finance ecosystem with the correct strategy and approach, resulting in considerable benefits for both consumers and companies.

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