

# Central Bank of the Republic of Azerbaijan

## Open Banking Road Map



**CENTRAL BANK**  
OF THE REPUBLIC OF AZERBAIJAN



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,  
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**State Secretariat for Economic Affairs SECO**

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## 1. Executive summary

The financial services ecosystem is currently undergoing a deep transformation. This transformation affects the process of developing, acquiring and delivering products and services in the ecosystem. The rise of new financial technology providers known as FinTechs (hereinafter - FinTech), combined with Open Banking, which enables individual banks and customers to share their financial data with third parties, is changing the status quo of the financial ecosystem. This new paradigm has the potential to turn the traditional financial services ecosystem into a dynamic and competitive environment where startups and small innovative companies are offering new products and services competing on an equal basis with larger providers.

The banking industry has been defending the “ownership” of their customers’ personal data and financial balances. However, thanks to Open Banking, financial institutions are being forced to rethink their business models to work on a more collaboratively fashion, both with other banking competitors and new financial technology start-ups, for benefiting end-customers.

This report developed based on international experience in cooperation with the International Finance Corporation (IFC) and contains important highlights in the implementation of Open Banking. At the same time, this document covers the complex measures planned to be carried out for Open Banking implementation in Azerbaijan.

## 2. Document scope

This document includes the following information:

- Detailed information about Open Banking concept, pros and cons, as well as business models;
- General information about Open Banking practices implemented in global markets;
- Information on the results of assessments and surveys conducted to determine the level of readiness of banks and FinTechs in the country for the implementation of Open Banking;
- Open Banking Road Map in Azerbaijan.

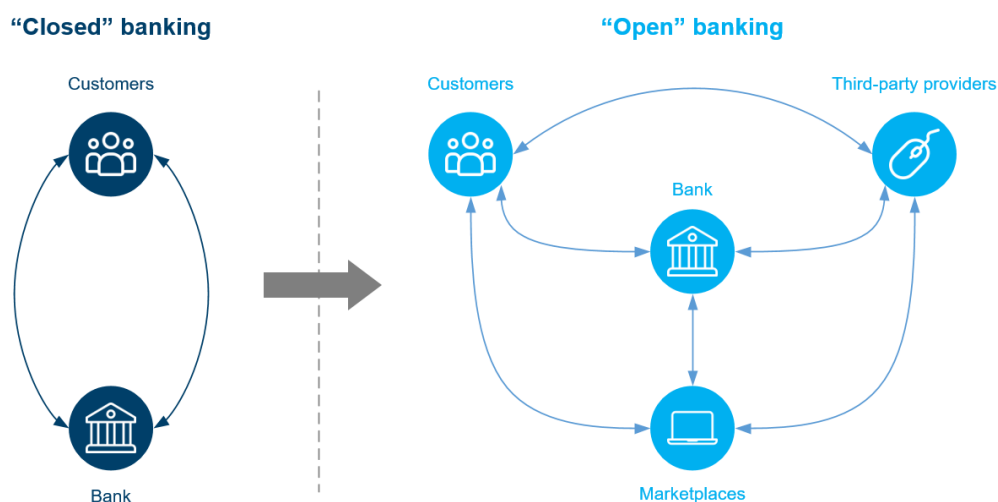
### 3. Open Banking approach

An Application Programming Interface (hereinafter - API) is a set of procedures, protocols and tools used for building software applications. API defines the mechanisms to build interactions between information systems.

The utilization of APIs in banking is not new. However, what has changed is how they are being embraced as a key component for facilitating Open Banking. Recently, the use of APIs in the banking industry mainly focused to automate the exchange of information between intra-bank information systems.

The adoption of open APIs in banking ushers in a shift from traditional banking models to Open Banking. Open Banking is a technology driven evolution of banking, making it possible for customers to use banking services in the context of other services, thereby combining innovative functionalities from banks and non-banks, leveraging open APIs. At the same time, the Open API is an open application programming interface that gives programmers access to financial information in financial services, as well as access to a wide user segment.

**FIGURE 1: OPEN BANKING APPROACH**



Open Banking can be defined as "disclosure of internal bank information and processes to external parties through digital channels." These parties may be customers, trusted partners or authorized third parties acting on behalf of customers. Open Banking provides an opportunity for enriched engagement between banks and third-party providers (hereinafter - TPP) ultimately resulting in increase of customer-centric digital services and accessibility.

## 4. Pros of Open Banking

Open Banking holds the potential to drive positive outcomes in the banking space, changing policy approaches of many banks in the financial services ecosystem. For instance:

- Open Banking allows the formation of new business models that meet customer expectations by further revitalizing the competitive environment in the banking sector;
- Open Banking allows expanding the scope of banking products and services provided as a result of the formation of partnerships between banks and non-bank organizations in the banking sector;
- Open Banking will lead to positive trends in applying innovative solutions in introduction of banking products and services;
- Open Banking will provide more efficient and effective integration processes by implementing reliable and standardized APIs that enables seamless connections with third parties.

## 5. Cons of Open Banking

While Open Banking brings new opportunities and changes to banking business models, its implementation may pose some concerns, in particular:

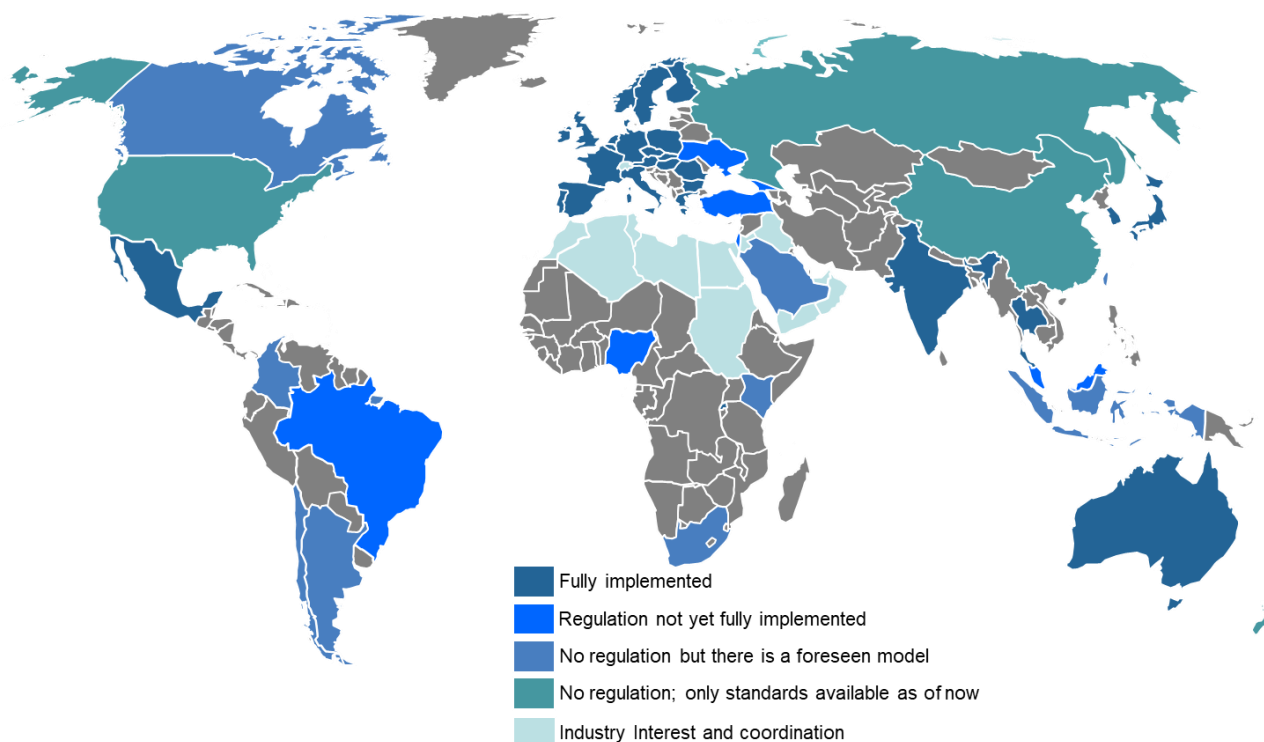
- Implementation of Open Banking in information systems could increase the chances of risks associated with data loss, identity theft, data protection violations, etc. Considering the nature of traditional data sharing channels in the banking industry, Open Banking will lead to a significant shift in the security landscape of the banking ecosystem. Cyber threats and attacks in the new era of banking may take different forms such as: a) attacks on third-party platforms; b) attacks on users; and iii) attacks on APIs. Establishing clearly defined technical standards and security protocols will go a long way in managing security risks that may arise because of Open Banking adoption. In addition, applications should be designed, bearing in mind the possible security challenges that may arise in a rapidly changing digital environment.
- Integrating third-party providers into the banking value chain increases the possibility of scammers gaining access to customer information and their finances. Under traditional banking, there is a clear definition of how customer losses are replenished

unless there is a reason to suspect negligence or fraud. However, Open Banking puts a twist to the situation, as it becomes less clear who bears the liability for customer losses, owing to the complex play of interactions in the ecosystem. To manage this, as the market evolves, the boundaries of the relationship and division of responsibilities between stakeholders in the ecosystem must be clearly defined and constantly updated.

## 6. World Open Banking implementation overview

There are a number of approaches to the implementation of Open Banking in the world (Figure 2). Most countries have a legal framework in this area, while in others the regulation of Open Banking is carried out by market players.

**FIGURE 2: THE WORLD MAP OF OPEN BANKING**



*Source: BBVA, Finastra, Konsentus, IFC analysis*

Figure 3 provides an overview of how the countries with Open Banking regimes in place or in progress rate on an Open Banking scale, with two important dimensions (mandatory vs. voluntary and required standardization vs. non-standardization).

**FIGURE 3: OPEN BANKING REGULATORY MATRIX**

Mandated standards

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Market-driven implementation	Russia	India	Bahrain	Mandated implementation
	Thailand	Mexico	Saudi Arabia	
		Israel	South Korea	
	Malaysia	Columbia	Rwanda	
		Brazil	Canada	
		Georgia	South Africa	
		United Kingdom	Australia	
		Nigeria		
		Hong Kong		
	USA	Chile	European Union and EEA	
	Argentina	Singapore	Turkey	
		Indonesia	Ukraine	
		Kenya	Japan	
		Switzerland		
		China		
		New Zealand		
Market-driven standards				

*Source: IFC analysis*

There are pros and cons to these different regulatory approaches to Open Banking. Where Open Banking is mandated, that is a strong statement of support by the government, which can jumpstart innovation. On the other hand, such requirements might be perceived as just an additional compliance burden, in which case they are unlikely to spur innovation. Regulators might be ahead of where the market is or what regulated entities are ready to take on. For example, according to The Open Banking Monitor estimates that more than 300 open banking-related developer portals are currently live, most of them launched by EU banks seeking to comply with PSD2 requirements. Only half of those PSD2-banks say their APIs are ready for use: the rest are sandboxes using example data generated by the bank itself.

In mandating Open Banking, regulators also risk setting overly prescriptive requirements that can become outdated rapidly, especially where technology is involved. This can then negatively affect innovation. Since the difficulty with a “hard rule” is, it can sometimes become overly onerous and therefore lose sight of the outcome it is trying to affect. The Association of Banks in Singapore’s API playbook as a good example in bringing together the regulator and industry participants to develop guidance to overcome “hard rule” approach drawbacks.

Regardless of what approach is taken, if governments want to encourage adoption of Open Banking, it is important to: (i) provide clarity regarding the regulatory stance towards

Open Banking; (ii) be aware of and stay in sync with industry readiness; and (iii) avoid the perception that it is merely a compliance box to be checked or something that increases compliance burden, but encourage and support more activities.

## 6.1. EU countries

The second Payments Services Directive (hereinafter PSD2) initiated the Open Banking wave in Europe, entering into force in 2016. PSD2 stipulates the guidelines for sharing banking data of consumers with third-party providers (Payment Initiation Service Providers (PISP) and Account Information Service Provider (AISP)). The directive targeted at improving the state of competition for payment service providers in the market, making payments safer and more secure, ultimately protecting consumers.

PSD2 provides the guidelines for banks and payment service providers to grant authorized PISPs and AISPs secure read and write access to customers account data through Open APIs, following request and due consent from customers.

The European Banking Authority (EBA) plays a lead role in the implementation of PSD2 across Europe, issuing guidelines and recommendations to stakeholders through its Regulatory Technical Standards (RTS). Within the EU, different markets allowed to voluntarily design their own open interfaces. Therefore, several European working groups have been developing API standards. The most successful is the Berlin Group, its framework provides the most widely used standard, followed by the UK Open Banking. The standards developed across Europe have been characterized by greater flexibility in technical implementation.

## 6.2. United Kingdom

In terms of Open Banking implementation globally, the UK considered ahead of the curve, being the first country to develop Open Banking standards. The implementation of the Open Banking Standards in the UK launched in January 2018, to stimulate competition amongst big banks and emerging players in the financial services ecosystem. The Open Banking Implementation Entity (OBIE) created especially to carry out standards and cross-system integrations. However, enforcement rests with the Competition & Markets Authority (CMA). Protection for consumers is the responsibility of the Financial Conduct Authority (FCA) (for account information and payment initiation services, under the PSD2 directive) or the Information Commissioner's Office (for data). As part of its responsibilities, the OBIE:

- creates messaging standards for Open Banking;



- determines the specifications for Open Banking APIs;
- maintains and manages the Open Banking directory;
- produces the guidelines for the emerging Open Banking ecosystem;
- manages complaints and settles disputes;
- develops and implements the security architecture for Open Banking.

The CMA requires the banks to provide upon request, access to customer's data via a secure and standardized form. The Open Banking Standard accelerated the EU payment services directive (PSD2) by specifically requiring banks to provide the access to third parties via APIs. In the UK, third parties (AISPs or PISPs) are authorized and regulated by the FCA.

### 6.3. Turkey

In 2019, Turkey has adopted the Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions, which paves the way for the introduction of Open Banking and full compliance with PSD2.

While it is not compelled to implement requirements of PSD2, Turkey made relevant amendments to the Law, which entered into force on 1 January 2020 and Open Banking adopted. The Open Banking approach includes brokerage services and account information services for payment transactions. These services defined by Law as licensed activities and are carried out by the Central Bank of Turkey.

In general, although the scope of the Open Banking approach is broad, the Open Banking approach in Turkey includes issues, in particular the opening of payment services to third-party providers. At the same time, the Interbank Card Center (ICC) in Turkey will be the technical coordinating body for Open Banking. Thus, any licensed organization must first connect to the APIs of the ICC, which in turn must ensure the connection with the APIs of other service providers.

### 6.4. Russia

The application of the Open Banking approach is developing in Russia. The Russian FinTech Association established, covering Sberbank, VTB, Gazprombank, Alfa Bank, Otkrytie, QIWI and other participants by the intention of Russian Bank. The main purpose of the Association is to create conditions for the development and application of new technological solutions to ensure the development of the Russian financial market, as well as the digitalization of the economy.

The Russian banking sector has not a specific regulation regarding Open Banking. Russian regulators, on the one hand, are closely watching EU payments reforms and on the other hand, non-bank payment organizations are highly interested in the development of regulations similar to PSD2 regulations in Russia. Banks are actively integrating technology solutions for clients to keep up with competition, and are looking at optimal ways for the integration of the open banking concept and APIs.

To the extent that Open Banking generally is not regulated and may not be fully in line with the existing rules, it cannot be used in full without the development of new legislation and changes to the current acts. For this reason, the Central Bank of Russia developed and published open API standards and other related documents (security of financial transactions, etc.) on 23 November 2020. The standards set uniform rules for the interaction of market participants applying API-based technologies. This will allow banks and FinTech companies to offer more efficient banking services upon customer consent.

## 6.5. Singapore

Singapore is one of the countries that has taken a market-driven approach to developing Open Banking. Some of the key developments promoting Open Banking in Singapore outlined thus:

- In 2016, the Monetary Authority of Singapore (MAS) in collaboration with the Association of banks in Singapore released an API playbook, taking a voluntary approach to its adoption. The standard, which benefits from the national registration identity card (NRIC) system, based on OAuth 2.0 and OIDC;
- All open APIs available in the financial services industry in Singapore catalogued in an API register. Some of these APIs include transactional APIs which facilitate transactional services for payments, funds transfer, etc. and product APIs, which provide information such as financial product details, interest rates, branch/ATM locations, etc.;
- A FinTech regulatory sandbox supported by the MAS allows FinTech innovators and financial institutions to conduct experiments on new product and service offerings;
- There are open data initiatives by financial institutions, which enable third-party providers to access APIs, thereby facilitating integration.

## 6.6. United States of America

In 2017, the United States National Automated Clearing House Association (NACHA) expressed support for the move towards an Open Banking approach in the United States, and appropriate measures have been taken in this regard. Later, NACHA in collaboration with the API Standardization Industry Group (ASIG), announced the development of several API use cases, focused on three areas: (i) fraud and risk reduction; (ii) data sharing and (iii) access to finance.

Additionally, in 2017, the Consumer Financial Protection Bureau released data sharing principles, encouraging banks to introduce APIs for data sharing. This was a rather facilitative than a mandatory approach. In 2018, NACHA joined forces with the IFX forum (now Afinis) to publish an implementation concept for RESTful APIs. According to Afinis, the standardized APIs should cover the following functionalities: (i) Transaction status retrieval; (ii) B2B billing interoperability; and (iii) Payment initiation. They have also deployed a sandbox including a developer portal.

Overall, the US does not have a legally prescribed approach to Open Banking yet. Instead, the market is driving efforts to roll out Open Banking across the banking industry. Most banks in the United States now provide API-based services to third parties through their developer portals.

## 6.7. Canada

Canada does not have an Open Banking standard in place yet. At present regulatory authorities and banks are acting appropriately towards designing an API standard.

In 2018, the Government of Canada announced its plans to commence appropriate consultation, research and analysis to explore the potential benefits of Open Banking for the banking sector. Following this announcement, to facilitate the consultation, an advisory committee on Open Banking was appointed.

In 2019, the standing Senate Committee on Banking, Trade, and Commerce released its report entitled “Open Banking: What It Means for You.”<sup>1</sup> The report included several recommendations articulated to lay the groundwork for unpacking Open Banking in Canada. In addition, in 2019, the Government of Canada published a “Review of the Benefits of Open Banking” to collect stakeholder feedback and suggestions.<sup>2</sup> The review lists the benefits of

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<sup>1</sup> [https://sencanada.ca/content/sen/committee/421/BANC/reports/BANC\\_SS-11\\_Report\\_Final\\_E.pdf](https://sencanada.ca/content/sen/committee/421/BANC/reports/BANC_SS-11_Report_Final_E.pdf)

<sup>2</sup> <https://www.canada.ca/en/departement-finance/programs/consultations/2019/open-banking.html>

the Open Banking approach to the country's financial sector, provides detailed information on the provision of FinTech services by small and medium-sized businesses using financial intermediation opportunities, digitalization of financial flows and strengthening security. The main purpose of the review was to study the expectations of the population and businesses during the implementation of the Open Banking approach in Canada, to obtain public opinion on consumer protection, security, financial stability and other aspects.

As a result of researches in this area, in April 2021, the Canadian Open Banking Initiative (OBIC) developed the Open Banking Manifesto and determined an Action Plan to implement the approach.

## 6.8. Mexico

Mexico adopted the regulatory-driven approach to unveiling Open Banking in 2018. In March 2018, the law regulating Financial Technology Institutions (The FinTech Law) came into effect providing stronger regulatory guardrails for FinTechs and defining the regulatory framework of the Open Banking principles. The main goal of the implementation of Open Banking in Mexico was to stimulate innovation and expand financial inclusion in the country, along with the formation of a competitive market in the banking sector.

Under the law, the National Banking and Securities Commission (CNBV) has begun licensing organizations that provide financial technology services. CNBV licenses FinTechs specializing in two areas within the framework of sandbox: collective financing or crowdfunding (increasing the access of economic entities to financial resources through the collection and distribution of financial resources) and e-money (e-Wallet services) organizations.

At the same time, FinTech legislation adopted in 2018 allowed payment organizations to use virtual assets (or crypto-currencies), but a year later, appropriate restrictions were imposed due to the risky, unsafe and price volatility transactions with virtual assets.

At present, various measures (sandbox challenge, etc.) are being implemented in the country within the framework of public-private partnership to expand the scope of FinTech innovations and stimulate the FinTech ecosystem.

## 7. Open Banking regulatory framework

When considering the implementation of Open Banking in the financial markets of the Republic of Azerbaijan, the above-mentioned pros and cons should be kept in a focus.

To expand the application of innovative financial technologies by bringing advanced tech solutions to the country and thus support FinTech activities, the Central Bank of the Republic of Azerbaijan has commenced measures to design a relevant legal framework and technological infrastructure for the implementation of Open Banking approach. In order to develop a digital banking ecosystem in the country, as well as expand e-services, making them more accessible by setting "customer-bank" relations on a more modern level, it is envisaged to conduct surveys with market players in the framework of public-private partnership, develop Open Banking roadmap and build (modernize) foundation of technical infrastructures.

To assess the level of readiness of market players for Open Banking, an analysis was conducted based on Open Banking Canvas (Table 1).

**TABLE 1: OPEN BANKING CANVAS**

Enforceability				Liability		
Standardization	Target TPPs	TPPs onboarding	Scope of services and data types	Governance	Target banks	AML / CFT
Reciprocity		Risk management		Implementation pace		Regulatory context & harmonization
Funding				Monetization		
Regulatory oversight						

*Source: IFC analysis*

The Canvas depicted in Table 1 above addresses the following 16 key topics with some key questions below (Table 2).

**TABLE 2: TOPICS AND QUESTIONS THAT WE NEED TO ANSWER**

Topic	Questions
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Enforceability	<ul style="list-style-type: none"> <li>• Would the regime's implementation and compliance be legally mandated?</li> <li>• Is compliance proposed on a voluntary basis? Determining whether Open Banking is left to the market or is brought about through law will have a significant importance.</li> </ul>
Liability	<ul style="list-style-type: none"> <li>• Who is to be held liable in the event of a fraud or a data breach? Even where the law is clear and financial institutions take all possible security measures and are technically not liable for data loss or breach, will consumers nonetheless expect the financial institution to compensate them for any losses suffered?</li> <li>• How will liability be solved? (by regulating data reception? By setting up obligations for regulated institutions? By implementing private safeguards?)</li> </ul>
Reciprocity	<ul style="list-style-type: none"> <li>• How will the reciprocity between the participants in Open Banking be regulated? Should depend on the Central Bank's policy objectives?</li> <li>• Do we implement data sharing frameworks to solve this issue?</li> </ul>
Standardization	<ul style="list-style-type: none"> <li>• Will an Open Banking "Common Data Model" covering all ecosystem participants be implemented? If it so, how (by whom) will this universal approach be defined? Does defining a Common Data Model mean that Open Banking is mandatory?</li> <li>• How to decide (who decides) what to standardize and what to leave to the market?</li> </ul>
Target TPP	<ul style="list-style-type: none"> <li>• Do TPPs currently use bank APIs?</li> <li>• What conditions must be met when using bank APIs? What should banks and TPPs do in return for using APIs?</li> </ul>
TPPs onboarding	<ul style="list-style-type: none"> <li>• What is the process for vetting TPP partners' access to the data? Is access FinTech-friendly?</li> <li>• How is the information about vetted partners shared with participating financial institutions and end-customers?</li> </ul>
Risk management	<ul style="list-style-type: none"> <li>• How is security (including authentication) handled? Is there a security standard in place? How is personal data stored and processed?</li> <li>• Are safeguards in place to guarantee data protection? How the division of responsibilities is regulated?</li> </ul>
Scope of services and data types	<ul style="list-style-type: none"> <li>• Which internal services should be opened to third parties?</li> <li>• Should the openness be applied to core services such as access to accounts, transaction history and KYC, or limited to non-core services such as currency, ATM, branches &amp; products?</li> <li>• Is it read-only services (e.g. transaction history) or should it also include payment initiation?</li> </ul>
Governance	<ul style="list-style-type: none"> <li>• Are these services made open via a common interface or is each institution required to devise its own interfaces?</li> </ul>

	<ul style="list-style-type: none"> <li>• What are the technical specifications? Who decides about interface requirements (standards) (regulator or banks) and how does the standard evolve?</li> <li>• How are TPPs involved in this process?</li> </ul>
Implementation Pace	<ul style="list-style-type: none"> <li>• Do we define a time lapse for preparation and then full implementation of Open Banking?</li> <li>• Do we define a phased approach (first systemic banks or dependent on the type of services)?</li> </ul>
Target banks	<ul style="list-style-type: none"> <li>• Which institutions should be targeted by the Open Banking regime?</li> <li>• What criteria to use when selecting target FIs (size, business directions, etc.)?</li> </ul>
AML/CFT	<ul style="list-style-type: none"> <li>• How are customers going to be onboarded to comply with existing KYC rules?</li> <li>• Introduction of an Open Banking approach will increase the number of potential customers of banks, as well as increase the number and volume of transactions. How will this increase affect the reliable and sustainable operation of banks' IT systems?</li> </ul>
Regulatory context and harmonization	<ul style="list-style-type: none"> <li>• Are there any legal restrictions that may affect the implementation of Open Banking approach (protection of personal data, etc.)?</li> <li>• How will Open Banking affect the existing laws? What is the best legal instrument to amend them? Will amendments be required to the existing legislation?</li> <li>• How will Open Banking approach be regulated in terms of different countries' legislation to implement cross-border financial services?</li> </ul>
Funding	<ul style="list-style-type: none"> <li>• How will the process of developing and complying with Open Banking standards be funded?</li> <li>• Are there human resources with appropriate skills and competencies to develop and implement Open Banking standards?</li> </ul>
Monetization	<ul style="list-style-type: none"> <li>• Will financial institutions and TPPs receive funding for their services as a result of the Open Banking approach?</li> <li>• Will the APIs provided be paid and / or free of charge? How will the "payment model" be formed?</li> </ul>
Regulatory Oversight	<ul style="list-style-type: none"> <li>• How does the Central Bank oversee the implementation and post-implementation of Open Banking approach?</li> <li>• What are the monitoring and control mechanisms that ensure that both financial institutions and TPPs continue to comply with the rules (standards)?</li> </ul>

Source: IFC analysis

## 8. Survey to assess the level of readiness for Open Banking in the country

### 8.1. Open Banking survey aim and focus groups

To assess the level of readiness of banks and FinTech organizations for the implementation of Open Banking in the country, surveys conducted through the Azerbaijan Banks Association (ABA) and the Azerbaijan FinTech Association (AzFina) in 2020-2021. The aim of this survey was to:

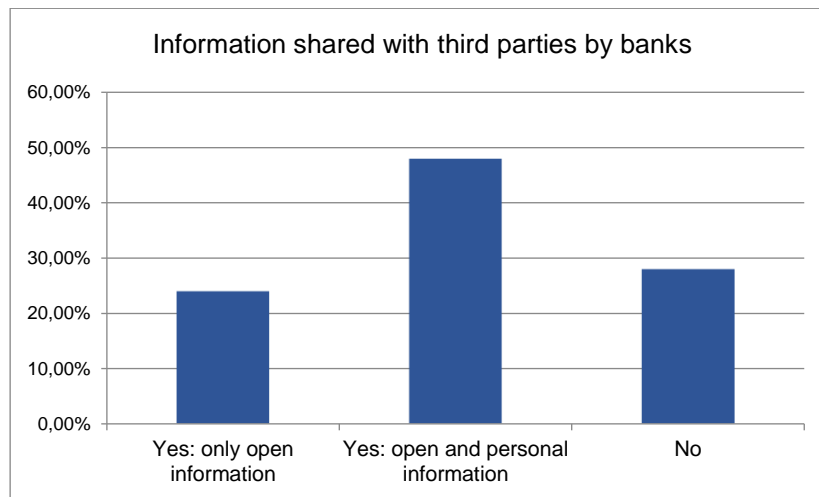
- study the expectations of banks and FinTechs when identifying Open Banking approach by the Central Bank;
- assess how prepared the banks and FinTechs are for adoption of Open Banking initiatives;
- ensure that banks and FinTechs are aware of Open Banking initiatives and have the necessary resources (human, infrastructure, etc.) to implement;
- be aware of the willingness of banks to share customer data with TPP in accordance with the legislation;
- establish correct and clear boundaries in consumer protection by banks and FinTechs;
- find out how equipped are the internal technical infrastructure of banks and FinTechs with adequate security mechanisms.

### 8.2. Bank survey findings

Most Azerbaijani banks are familiar with the concept of Open Banking, with 28% of them currently implementing payment and/or financial services based on API.

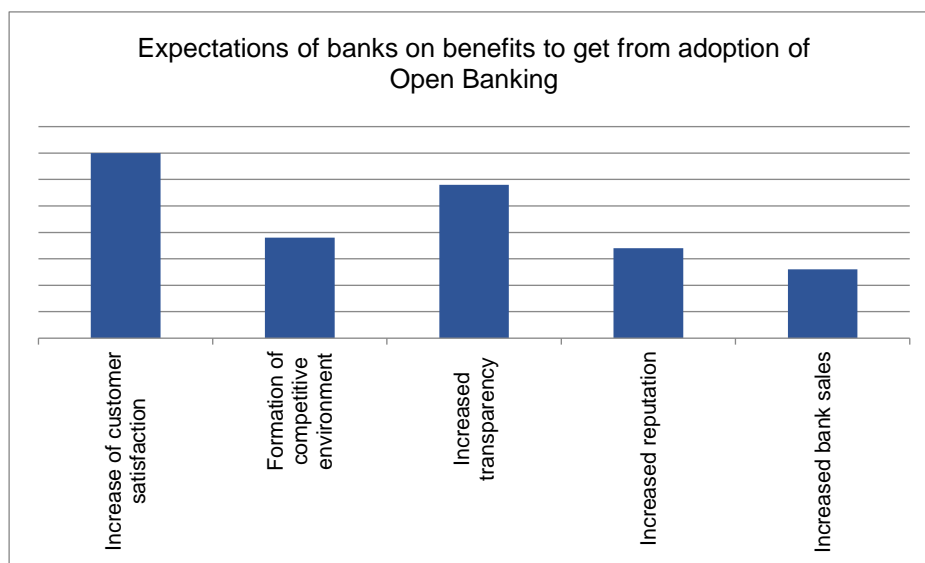
Almost half of respondent banks (48%) are sharing both private and public information, mainly account information and account balances, however the information shared does not have a common pattern.



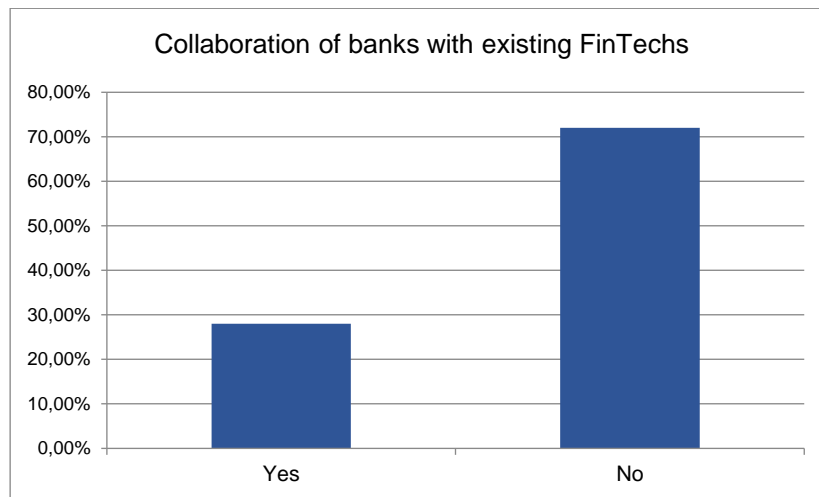


Almost all banks (96%) receive and share information from other institutions through API (CBAR, EGIS). Almost all banks' (88% of respondents) core banking systems support API integration. Only 44% of banks have APIs to share information with TTP or implemented consent management tools. Around 92% of banks state to be mid to highly open to collaboration with FinTechs and other TTPs.

Most banks only see "soft benefits" to the adoption of Open Banking such as increased transparency or customer satisfaction, but not "hard" benefits such as sales increase.



Most banks, up to 72%, have not identified any TTP to offer their services. Again the reasons behind should be explored, either is a lack of existing legislation or lack of interest from banks or from FinTechs to collaborate or simply FinTechs market have not been fully formed yet.

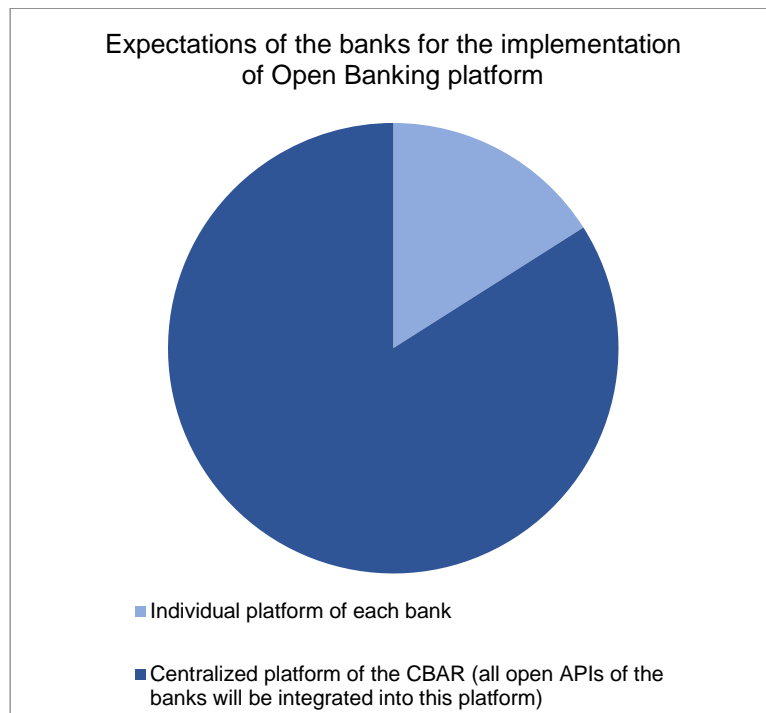


There is no clear statement in terms of what information banks are interested in obtaining (or expanding coverage) from other financial institutions through APIs. Banks are only interested to share information regarding ATM location and list of branches; account balance and account details rank the lowest. Banks are interested to get account details from other institutions, but not willing to share theirs.

So far, regulation seems to be the largest barrier to Open Banking adoption (60% of respondents). Regarding challenges affecting Open Banking lack of expertise on Open Banking practices and system interoperability are the two most cited.

As for the monetization of APIs to be provided to FinTech, a bit more than half of the banks (52%) state that they should provide their APIs free of charge to TTPs.

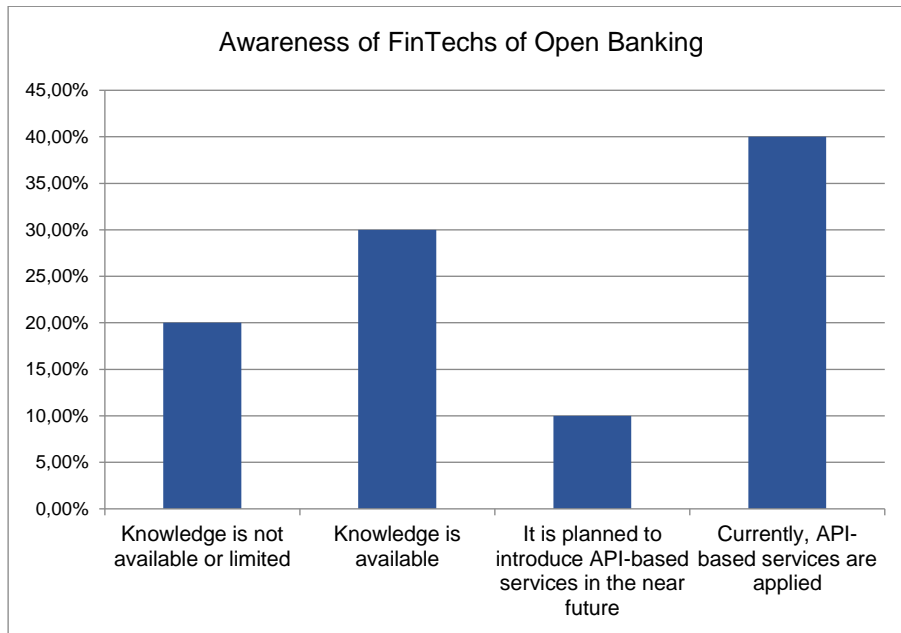
From the moment Central Bank publishes Open Banking regulations most banks estimate between six months to one year to implement Open Banking standards. According to survey findings, a “recommended but not enforced” approach is preferred as opposed to a “mandatory to all banks” one. At the same time, there is a clear expectation (up to 84% of banks) for the implementation of Open Banking through the Central Bank’s centralized platform.



Being a result of the survey conducted with banks, it was determined that when using Open API services, it is necessary to have an appropriate regulatory framework that would regulate the mechanism of compensation to the customer. At the same time, the main “success factor” in the implementation of the Open Banking approach is the effective collaboration platform that needs to be established between the Central Bank, banks and FinTechs.

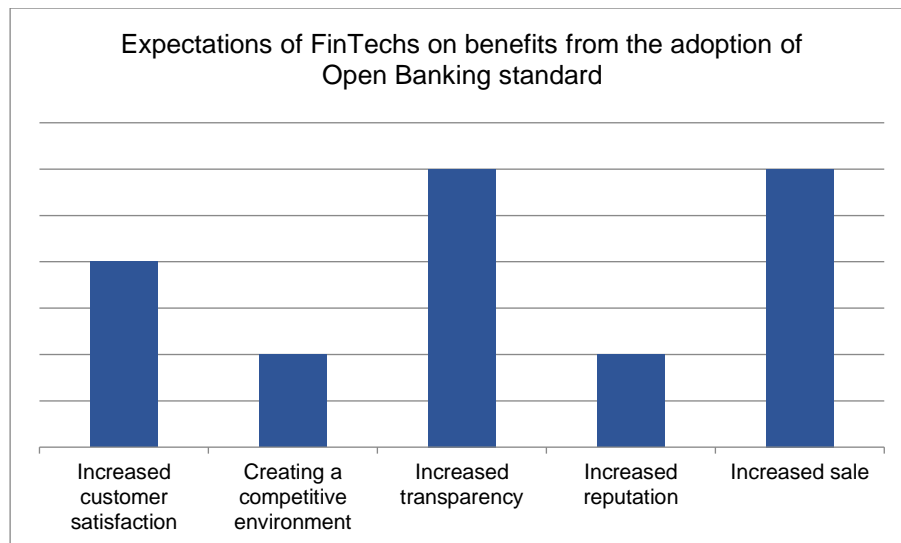
### 8.3. FinTechs survey findings

40% of FinTech organizations operating in the country currently use API-based payment and / or financial services, and 20% are not sufficiently aware of Open Banking.

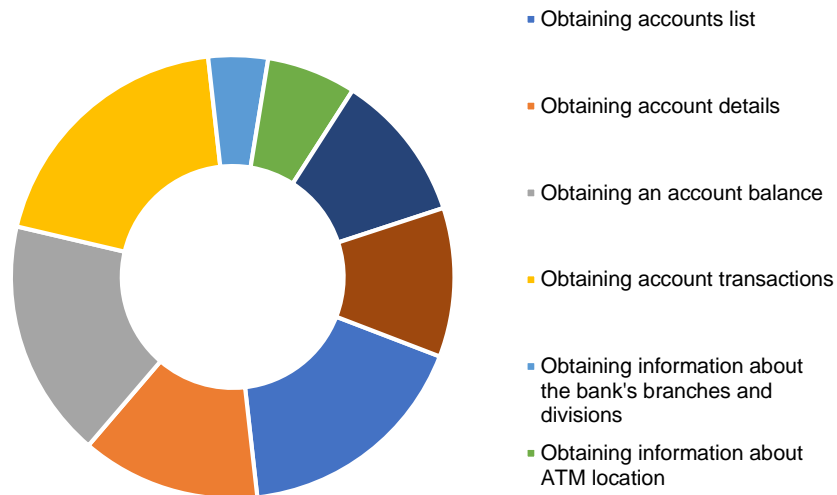


80% of the respondents said that they received information mainly through the APIs of other institutions (CBAR, EGIS) to provide payment services.

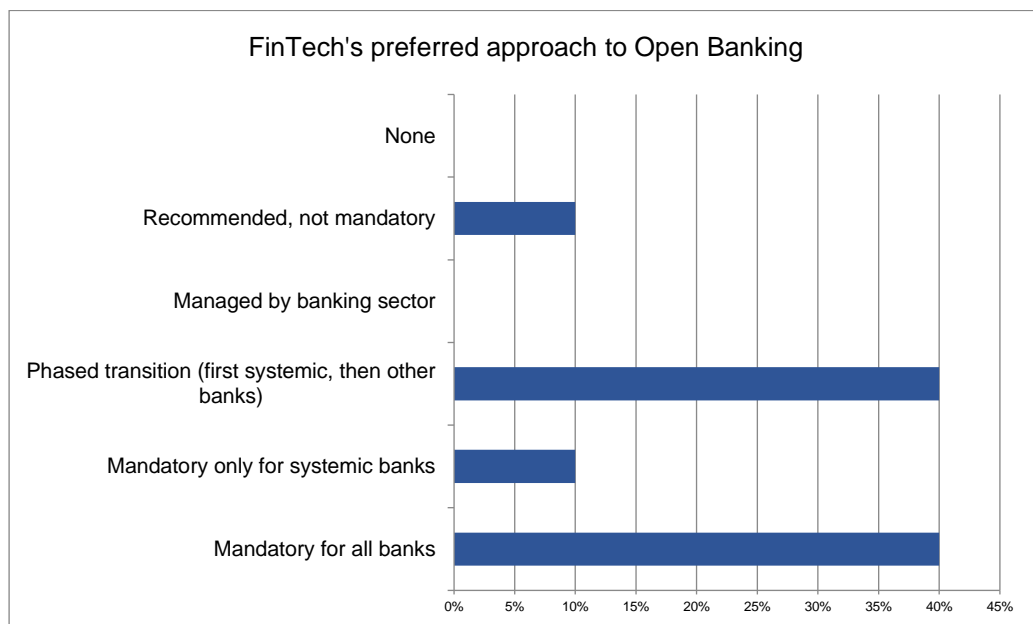
In a survey to determine the benefits of Open Banking, the majority of respondents said they believed the approach would increase transparency and sales in the country.



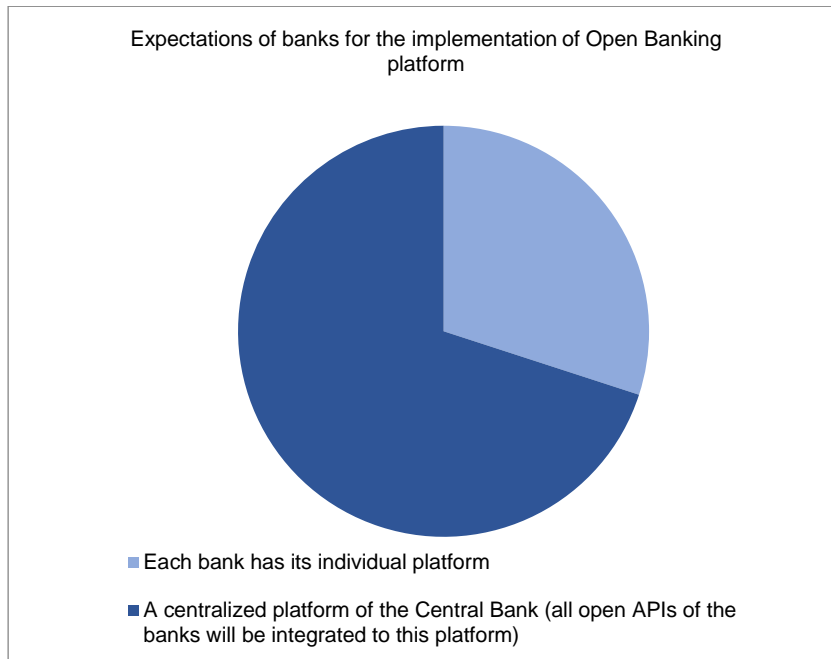
Half of the respondents see the lack of an appropriate legal framework as the main obstacle to the implementation of Open Banking, while the other part considers it necessary to create a competitive market environment. At present, FinTechs are more interested in obtaining customer account information from financial institutions.



Unlike banks, FinTechs noted that it took less time (up to 6 months) to implement the Open Banking approach, which shows that FinTechs are more flexible and ready for changes. Moreover, FinTechs responded to inquiries by saying that Open Banking approach should be "mandatory" for banks, but a "phased transition" was preferable.



Further, according to survey findings, FinTechs, like banks, prefer to have a centralized platform for Open Banking by the Central Bank.

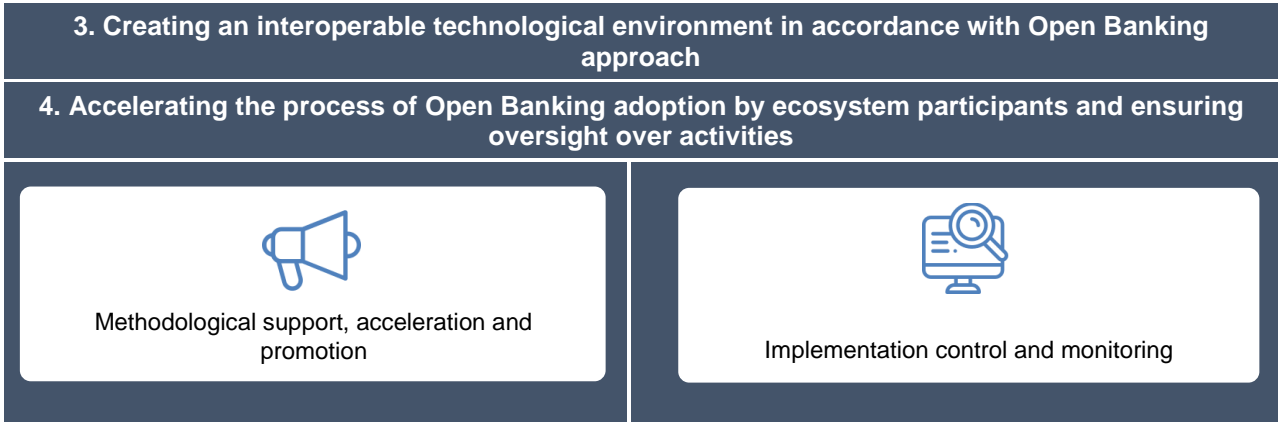


## 9. Pillars of implementation of Open Banking

This Road map encapsulates the main directions for the implementation of the Open Banking approach and specific initiatives in these directions, aiming to expand the implementation of financial technologies for banking products and services, introduce advanced solutions based on innovative technologies and standardized APIs for the use by business entities through TPPs. The implementation of the Open Banking approach, which necessarily includes all participants in the banking sector in the country, will be guided by the action plan outlined in the “Road map for the implementation of Open Banking”. The implementation of the action plan will be ensured with the active involvement of the Central Bank and ecosystem participants.

**FIGURE 4: PILLARS OF OPEN BANKING IMPLEMENTATION**





9.1. Pillar 1: Ensuring effective management with the involvement of ecosystem participants for the implementation of Open Banking

**Action 1.1. Establishment of a Working Group to ensure effective coordination the implementation of Open Banking approach.**

Implementation of the Open Banking approach will accelerate an emergence of new service providers of financial technologies in the country and will create the better opportunities to provide the innovative solutions. This new paradigm has the potential to turn the traditional financial services sector into a more dynamic and competitive market where startups will be able to offer new products and services, competing with existing major financial service providers.

Based on international experience, the Central Bank plans to establish a Working Group, consisting of financial sector participants and representatives of FinTechs to implement Open Banking approach. The ABA and AzFina will be actively engaged in this process.

**Action 1.2. Conducting regular meetings of the Working Group, formulating a regulatory framework and ensuring accountability.**

The Working Group will be actively involved in setting standards for Open Banking that will enhance innovation, competition and transparency in the financial sector. To this end, representatives of the Working Group will participate in regular meetings to ensure the establishment of Open Banking Standards and development of a regulatory framework.

## 9.2. Pillar 2: Creating a legislative framework and recommendations to support Open Banking approach

### **Action 2.1. Enactment of the Law on “Payment Services and Payment Systems”.**

The business environment and regulatory regime created in advanced countries (European Union, USA, Singapore, Indonesia, etc.) for the development and digitalization of the financial sector are constantly being improved in accordance with market requirements. Regulators not only encourage the development of innovations, but also try to prevent damage to the financial system, consumers and minimize risks.

As part of the implementation of the instructions to improve the regulatory framework of payment services in the "State Program on expansion of digital payments in the Republic of Azerbaijan for 2018-2020", approved by Order No. 508 of the President of the Republic of Azerbaijan dated 26 September 2018, the Central Bank has prepared the draft Law of the Republic of Azerbaijan on “Payment Services and Payment Systems” (Draft).

During the development of the Draft, the experience of European countries, Turkey, Georgia, Kazakhstan, Ukraine, the Russian Federation was carefully studied, and also, discussed with the banking sector and non-bank payment service providers in our country.

The Draft covers the types of payment services, the rights and obligations of payment service providers in the provision of these services, the economic, legal and organizational basis of the activities of payment organizations, electronic money organizations and payment system operators, as well as identifies key aspects of state regulation (including regulatory sandbox) and control.

Moreover, the Project includes the activities of third-party providers (AISP and PISP) that will operate in the country on the principles of Open Banking, as well as the norms governing the relationship between payment service providers and these organizations.

These regulations provide the same conditions for the banks and innovative payment service providers such as fintex in the field of payment services.

### **Action 2.2. Formation of a legal framework for regulatory sandbox**

Given the role of innovative companies in increasing financial inclusion in the financial ecosystem, most countries adopt various policy documents to foster the activities of these organizations. At present, regulators in many advanced countries allow innovative products and services to be tested in a specific regulatory and operational environment without risking



the financial system. Regulators create a favorable environment for startups through the regulatory sandbox; regulators create a favorable environment for startups and strengthen collaboration with them.

In accordance with the international experience, it will be taken appropriate measures to implement sandbox in our country, to create a regulatory framework for regulatory sandbox, to involve startups in this environment and provide intangible support.

**Action 2.3. Establishment of a regulatory framework for obtaining information on financial institutions and banking products through an Open API.**

In the Open Banking approach, it is important to standardize open data on the financial sector and make it available to financial market participants. Bringing open data to a single standard will not only create a competitive market, but will also stimulate innovation in the country. For this purpose, the Central Bank will formulate requirements for open data APIs, including financial institutions and banking products.

**Action 2.4. Formulation of security requirements during operations performed through an Open API**

Given the growing number of cyber threats in the world, one of the priority tasks of the Open Banking approach is to identify and comply with information security requirements. Financial sector actors need to have appropriate security systems to prevent potential information failures and cyber threats, as well as to take precautions.

To this end, a regulatory framework containing appropriate security protocols and requirements will be established to ensure security during the Open API-based information exchange between the parties.

**Action 2.5. Formulation of API requirements for payment transactions**

The draft Law of the Republic of Azerbaijan on “Payment Services and Payment Systems” developed taking into account the aspects of PSD2 defines the rights and responsibilities of the Payment Initiation Service Provider (PISP) for conducting payment operations. A PISP is a service provider that is able to initiate a payment transaction on behalf of a customer from the customer’s account opened with another payment service provider at the request of the customer. It is necessary to develop standardized APIs to ensure the security of PISP operations. To this end, the Central Bank will develop and

monitor the implementation of relevant API specifications for payment transactions in coordination with financial sector actors.

**Action 2.6. Formulation of API requirements for retrieving account information.**

The draft Law of the Republic of Azerbaijan “On Payment Services and Payment Systems” developed taking into account PSD2 aspects defines the rights and responsibilities of the Account Information Service Provider (AISP). An AISP is a payment service provider that retrieves payment information from different accounts serviced by one or more other payment service providers online. It is necessary to develop standardized APIs to ensure the security of AISP operations. To this end, the Central Bank will develop the API specification on account information in coordination with financial sector actors.

**Action 2.7. Formation of regulatory framework for dispute management system.**

In international practice, a Dispute Management System (DMS) has created to implement the Open Banking approach. DMS is a platform for issuing payment orders and requesting account information, and for exchanging information on disputes that may arise between information providers and TPPs. Its main goal is to create a fair and impartial work environment for all parties. To this end, based on international experience, measures will be taken to create a dispute management system to implement Open Banking approach in Azerbaijan and to form an appropriate methodological base.

### 9.3. Pillar 3: Creating an interoperable technological environment in accordance with the Open Banking approach

**Action 3.1. Establishment of a centralized Open Banking platform by the Central Bank.**

Based on the experience of benchmark countries, as well as the results of surveys conducted on the banking sector and FinTech organizations in Azerbaijan, the Central Bank intends to create a centralized API infrastructure. To this end, it is planned to introduce three API categories as part of the digitalization of the financial sector:

1. Open data – submission of open information such as banking products, branches and divisions, ATMs, exchange rates, etc.;
2. AISP – list of accounts, account balance, information on transactions;
3. PISP – issuing payment orders.

The Central Bank will create a centralized Open Banking Platform and ensure the integration of startups into the banking sector.

**Action 3.2. Adaptation of technical infrastructures of banks operating in the country (core banking system, mobile and internet banking resources) to the requirements of regulatory documents for Open Banking.**

Rapid development of information technology makes it important for banks operating in the country to create APIs and other information resources and digital tools, to ensure reliable and sustainable operation, as well as modernization. At the same time, with the introduction of the Open Banking approach, banks need to establish special communication channels for the exchange of information in compliance with security requirements and ensure API-based operations.

To this end, banks will gradually bring their existing technical infrastructure (core banking system, mobile and Internet banking resources) in line with the standards (requirements) that will be developed in connection with the implementation of Open Banking.

**Action 3.3. Adaptation of FinTechs' technical infrastructure to the requirements of Open Banking regulations.**

Implementation of the Open Banking approach in the country, along with banks requires updating the internal software and technical platforms of FinTech organizations operating in the country in accordance with established standards (requirements), as well as to ensure reliable and sustainable operation. The results of a survey of FinTech organizations show that, unlike banks, it will be easier and faster to modernize the technological infrastructure of FinTech companies to meet these requirements.

After enactment of the Law on Payment Services and Payment Systems, fintex organizations will be gradually brought into line with the requirements to be established in order to organize the standardized, secure and reliable operation of API connections.

**Action 3.4. Ensuring the integration of banks and FinTechs operating in the country into the Central Bank's Open Banking Platform.**

Results of the survey conducted among banks and FinTech organizations operating in the country, revealed that they prefer to have a centralized API platform for Open Banking and oversight over activities to be carried out by the Central Bank. To this end, the

integration of banks and FinTechs into the centralized platform to be created by the Central Bank will be ensured.

#### 9.4. Pillar 4: Accelerating the process of implementation of the Open Banking approach by ecosystem participants and providing monitoring function

##### **Action 4.1. Identifying Open Banking-based business solutions and encouraging their implementation.**

Based on the best practices, before developing new solutions that support the Open Banking approach, organizations analyze existing business processes and evaluate the business model in terms of efficiency and effectiveness. At the same time, in order to ensure the effectiveness of activities in this direction, regulators establish a regulatory test regime and provide organizations with appropriate regulatory and methodological support. For this purpose, the Central Bank will organize an appropriate regulatory sandbox, and provide an opportunity to test innovative solutions based on Open Banking..

##### **Action 4.2. Organization of trainings to increase the awareness of ecosystem participants about Open Banking.**

According to the results of a survey held among banks and FinTech organizations operating in the country, it became clear that the organizations do not have adequate knowledge and skills in the relevant field. This, in turn, hinders the development of solutions based on the Open Banking approach, as well as the widespread use of these services. For this purpose, the Central Bank will periodically organize training programs with banks, FinTechs and international organizations to provide knowledge and skills on Open Banking.

##### **Action 4.3. Conducting incentive measures (hackathon, webinar, etc.) to speed up the process of development of Open Banking-based products and services.**

International experience shows that the level of effectiveness of the Open Banking approach depends largely on the awareness of financial sector participants, TPPs and customers. Considering this fact, to create favorable conditions for all participants in the country, as well as to stimulate the process of creating and implementing Open Banking-based products and services (international practice, Open Banking priorities, Open APIs and principles of their work, access to open financial resources, Open Banking solutions

and security aspects), the Central Bank, together with international organizations, will organize relevant trainings for banks and FinTech organizations.

**Action 4.4. Continuous upgrading the regulatory framework for Open Banking in the light of international experience and organization of monitoring function in accordance with requirements.**

To ensure the sustainable development of Open Banking in the country, issues arising in the implementation process, as well as during the process of operating the created technical environment will be analyzed in detail and necessary steps will be taken to improve the existing regulatory framework. The changes will be reflected in the specifications of the submitted APIs, as well as data providers and TPPs will be provided with methodological support.

**ROAD MAP FOR THE IMPLEMENTATION OF OPEN BANKING**

No	Action	Implementation	Executor
<b>Pillar 1: Ensuring effective management with the involvement of ecosystem participants for the implementation of Open Banking</b>		<b>2021-2025</b>	
1.1	Establishment of a Working Group to effectively coordinate the implementation of Open Banking approach.	2021	CBAR, ABA, AzFina
1.2	Conducting regular meetings of the Working Group, formulating a regulatory framework and ensuring accountability.	2022-2025	CBAR, ABA, AzFina
<b>Pillar 2: Creating a legislative framework and recommendations to support Open Banking approach</b>		<b>2021-2022</b>	
2.1	Enactment of the law on “Payment Services and Payment Systems”	2021-2022	CBAR
2.2	Formation of a regulatory framework for Regulatory Sandbox	2022	CBAR
2.3	Establishment of a regulatory framework for obtaining information on credit institutions and banking products through an Open API.	2022	CBAR
2.4	Formulation of security requirements during operations performed through an Open API	2022	CBAR, ABA, AzFina
2.5	Formulation of API requirements for payment transactions	2022	CBAR, ABA, AzFina

2.6	Formulation of API requirements for retrieving account information.	2022	CBAR, ABA, AzFina
2.7	Formation of regulatory framework for Dispute Management System.	2022	CBAR
<b>Pillar 3: Creating an interoperable technological environment in accordance with the Open Banking approach</b>		<b>2021-2023</b>	
3.1	Establishment of a centralized Open Banking Platform by the Central Bank.	2021-2022	CBAR
3.3	Adaptation of technical infrastructures of banks operating in the country (automated operating system, mobile and internet banking resources) to the requirements of regulatory documents for Open Banking.	2022-2023	ABA
3.4	Adaptation of FinTechs' technical infrastructure to the requirements of Open Banking regulations.	2022-2023	AFA
3.5	Ensuring the integration of banks and FinTechs operating in the country into the Central Bank's Open Banking Platform.	2022-2023	CBAR, ABA, AzFina
<b>Pillar 4: Accelerating the process of implementation of the Open Banking approach by ecosystem participants and providing monitoring function.</b>		<b>2022-2025</b>	
4.1	Identifying Open Banking-based business solutions and encouraging their implementation.	2022-2025	CBAR, ABA, AzFina
4.2	Organization of trainings to increase the awareness of ecosystem participants about Open Banking.	2022-2025	CBAR, ABA, AzFina
4.3	Conducting incentive measures (hackathon, webinar, etc.) to speed up the process of development of Open Banking-based products and services.	2022-2025	CBAR, ABA, AzFina
4.4	Continuous upgrading the regulatory framework for Open Banking in the light of international experience and organization of monitoring function in accordance with requirements.	2022-2025	CBAR