

The Development of Open Banking and the Analysis of Third-Party Providers in Azerbaijan

Abstract. The concept of open banking emerged less than 10 years ago, but today, millions of people in Europe use open banking products. In particular, in the UK, more than half of consumers have used them at least once. In Azerbaijan, the Central Bank took the first step towards implementing open banking in 2018, creating an instant payment system. In October 2021, the Central Bank of the Republic of Azerbaijan presented the Open Banking Roadmap for 2021-2025. This study reflects the current situation of introducing the open banking model in Azerbaijan. The primary research objective is to provide an overview of the open banking landscape in Azerbaijan, enhance information accessibility, and position it as a subject for comparative analysis with open banking practices adopted in various global regions. The author used qualitative methodology, including content analysis and comparison methods, to assess the readiness of the current financial sector for the open banking approach, its features, the development of third-party providers (TPPs), and the interest in the open banking approach. The official website of the Central Bank of the Republic of Azerbaijan and the results of previous independent research are the sources of data on open banking in Azerbaijan that were used for the analysis. The analysis revealed a limited development of TPPs offering open banking services and deficiencies related to the structural aspects of explicit consent in Azerbaijan. Although the implementation of open banking in Azerbaijan is somewhat later than in other countries, the steps taken by the government indicate a prospect for the rapid development of the open banking model. An important step in this direction was the adoption of the Law "On Payment Services and Payment Systems" covering open banking, the acquisition of licenses by TPPs within the framework of the regulatory approach, support of open banking services, and API support. Azerbaijan's current open banking development follows the regulatory-based European model and the Berlin Group standard for API security. It is considered more secure than other market-based and hybrid approaches in ensuring customer safety in open banking. For the faster development of the open banking model in Azerbaijan, features such as ease of use, speed of transactions, security, elimination of forced dependence on multiple banking applications using TPPs, and the ability to control personal financial data features should be presented to the society with social networks, and other by means.

Keywords: open banking, fintech, third-party providers, regulation in the banking sector, Berlin Group, Revised Payment Services Directive.

Suggested Citation

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Розвиток відкритого банкінгу та аналіз сторонніх постачальників в Азербайджані

Анотація. Концепція відкритого банкінгу виникла відносно недавно, але вже сьогодні у Європі продуктами відкритого банкінгу користуються мільйони людей. Зокрема, у Великій Британії більш як половина споживачів задіяли їх хоча б раз. В Азербайджані Центральний банк зробив перший крок до впровадження відкритого банкінгу в 2018 році, створивши систему миттєвих платежів. У жовтні 2021 року Центральний банк Республіки Азербайджан представив Дорожню карту розвитку відкритого банкінгу на 2021-2025 роки. Мета цього дослідження – презентувати огляд ландшафту відкритого банкінгу в Азербайджані, результати якого будуть основою для порівняльного аналізу з практикою відкритого банкінгу, прийнятою в різних регіонах світу. Автор використав якісну методологію, включаючи контент-аналіз та методи порівняння, щоб оцінити готовність суб'єктів фінансового сектору до впровадження відкритого банкінгу, його особливості, розвиток сторонніх постачальників та зацікавленість у моделі відкритого банкінгу. Джерелами інформації про відкритий банкінг в Азербайджані, яка була використана для аналізу, є офіційний сайт Центрального банку Республіки Азербайджан та результати попередніх незалежних досліджень. Результати проведеного аналізу вказують на обмежений розвиток сторонніх постачальників, що пропонують послуги відкритого банкінгу, а також недоліки, пов'язані зі структурними аспектами явної згоди в Азербайджані. Хоча впровадження відкритого банкінгу в Азербайджані відбувається дещо пізніше, ніж в інших країнах, кроки, зроблені урядом, вказують на перспективу швидкого розвитку моделі відкритого банкінгу в країні. Важливим кроком у цьому напрямку стало прийняття Закону «Про платіжні послуги та платіжні системи», який стосується відкритого банкінгу, отримання ліцензій сторонніми постачальниками в рамках регуляторного підходу, підтримки послуг відкритого банкінгу, та технічної підтримки API. Поточний розвиток відкритого банкінгу в Азербайджані слідує європейській моделі, що базується на нормативних актах і стандарті Берлінської групи щодо безпеки API. Цей підхід вважається більш безпечним, ніж інші ринкові та гібридні підходи щодо забезпечення безпеки клієнтів у відкритих банківських операціях. Для швидшого розвитку моделі відкритого банкінгу в Азербайджані такі функції, як простота використання, швидкість транзакцій, безпека, усунення вимушеної залежності від кількох банківських додатків із використанням сторонніх постачальників, а також можливість контролювати особисті фінансові дані, повинні бути представлені на розгляд суспільства.

Ключові слова: відкритий банкінг, фінтех, сторонні постачальники, регулювання в банківському секторі, Берлінська група, переглянута Директива про платіжні послуги.

INTRODUCTION

Open banking has continued to grow rapidly worldwide in recent years. Despite the availability of information on the implementation of open banking in different countries, it was observed that the literature review on open banking in Azerbaijan is quite limited, and the availability of information on the implementation and current state of open banking is almost at a low level. In this regard, this study presented the results reflecting the current situation on the introduction of open banking in Azerbaijan.

Firstly, this study presents the concept of open banking, the history of open banking development in Azerbaijan, and the role of the Central Bank as a regulator in the application of open banking. It investigated the API security standard and defined the steps to increase the potential of using open banking in Azerbaijan. In the last part, based on the survey results on open banking conducted by the Central Bank of the Republic of Azerbaijan between Banks and Third-Party Providers (TPPs), the author evaluated the interaction of the parties, API support, awareness, and approach to open banking. In addition, the article raises some issues on open banking service support in Azerbaijan.

THEORETICAL BACKGROUND

Open Banking

The open banking model involves sharing customer financial information with third parties through standardized APIs or secure channels within the framework of national legislation based on their consent. The Bank of International Settlements and Organization for Economic Co-operation and Development defines the concept of open banking as follows: "Open banking is the sharing and leveraging of customer-permissioned data by banks with third-party developers and firms to build applications and services, including, for example, those that provide real-time payments, greater financial transparency options for account holders, marketing and cross-selling opportunities." (Bank for International Settlements [BIS], 2019, p.4) and "The concept of Open Banking is generally well understood as the practice of sharing banking data via standardized and secure interfaces at the request of clients." (Organization for Economic Co-operation and Development [OECD], 2023, p.6). Also, open banking is defined as "an initiative which facilitates the secure sharing of account data with licensed third parties through Application Programming Interfaces (APIs), empowering customers with ownership of their data" (O'Leary et al., 2021). The European Banking

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Association defines open banking as "a bridge between two worlds" and allows customers to use fintech to access banking services while also combining the innovative functions of banks and non-banks with infrastructure (Euro Banking Association [EBA], 2016). Open banking is seen as an evolution based on digital technology that increases customers' control over their financial data and increases transparency in the banking sector (Mastercard, 2021). Open banking allows licensed intermediaries to access client financial information and accounts with customers' explicit consent (Heybətov, 2021).

Implementation of open banking will result in lower costs of integrating with third parties, creating and developing a digital environment, and expanding opportunities for sharing and managing customer financial information (Həsənov, 2022). "The advantages of open banking include radical improvements in customer experience and the ability to develop and deliver financial products more quickly" (Zeynalova, 2023, p. 304). Open banking includes the benefits of "working better together," "transaction without borders," and "making an impact on customers." (Zhou et al., 2022). In addition to increasing financial inclusion, open banking offers TPPs the opportunity to provide better service and expand the ecosystem through customer behaviour analysis (Osmanov, 2023a). "Open banking also can address financial exclusion if properly designed" (Plaitakis & Staschen, 2020).

Open banking development history in Azerbaijan

The United Kingdom ranks first among the leading countries that play an important role in applying and developing the open banking model. In 2016, the United Kingdom became the first country to allow banks access to customer data and adopt open banking (Güney, 2023). The Central Bank of the Republic of Azerbaijan implemented the first official step regarding open banking with the "Roadmap for the Implementation of Open Banking"¹ covering the years 2021-2025. With this presented road map, the data-based research of the current open banking in Azerbaijan has been reflected, which includes the survey results of banks and fintech, as well as the approach and experience of the world countries to the open banking model. Along with the legal and technical approach to the open banking model of Azerbaijan, the future timetable planned for the implementation of open banking in the current financial sector, as well as the setting of technical and security standards, the evaluation and adoption of world experience, has been mentioned.

Steps that were taken regarding Open banking in Azerbaijan:

✓ On September 26, 2018, the Instant payment system was created based on the "State Program for the Expansion of Digital Payments in the Republic of Azerbaijan in 2018-2020"^{2,3}.

¹ <https://www.cbar.az/page-716/open-banking-road-map?language=en>

² <https://www.cbar.az/page-479/instant-payments-system-ips?language=en>

³ <https://uploads.cbar.az/assets/State%20programme.pdf>

✓ October 2021, a strategic road map related to open banking was presented⁴.

✓ In 2022, the integration of banks into the open banking platform was completed, and the integration of TPP into this platform continued⁵.

✓ On July 14, 2023, the law "On Payment Services and Payment Systems", which contains the legislative basis of open banking, was adopted and entered into force on October 14, 2023⁶.

✓ On January 31, 2024, the "Regulation on the Application of the Special Regulatory Regime" was approved and entered into force on February 14⁷.

✓ On March 13, 2024, the "Regulation on the implementation of strong customer authentication" was approved⁸.

✓ From April 2, 2024, the application period for the participation of currently operating fintech in the "Special Regulatory Regime" has been announced, and the application period covers the date range of May 1-31, 2024⁹.

✓ As of September 30, 2024, 13 electronic money institutions and 8 payment institutions have received licenses and the AniPay portal created by the Central Bank of the Republic of Azerbaijan.

The Central Bank of Azerbaijan will further promote the open banking model from 2024 (Osmanov, 2023b). In a regional meeting held by the Central Bank of the Republic of Azerbaijan on June 14, 2024, with the representatives of the central banks of Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan, issues related to increasing the use of the instant payment system and the impact of open banking on the development of fintech were discussed (Mərkəzi Asiya ölkələrinin, 2024).

Open banking model in Azerbaijan

The open banking model in Azerbaijan includes a regulatory approach (Həsənov, 2022). Azerbaijan applies open banking based on the steps taken by the United Kingdom and Europe on open banking as legislation. Below, we will focus on some topics and questions that the Central Bank of the Republic of Azerbaijan mentioned in the "Roadmap for the Implementation of Open Banking" regarding the implementation and future activities of open banking in Azerbaijan.

⁴ <https://uploads.cbar.az/assets/98ce036fa58c999a6e2874dfe.pdf>

⁵ <https://report.az/maliyye-xeberleri/merkezi-bank-banklarin-aciq-bankciliq-platformasina-inteqrasiyasi-basa-catib/>

⁶ <https://e-qanun.az/framework/54872>

⁷ <https://www.cbar.az/press-release-4507/on-approval-of-the-regulation-on-the-application-of-the-regulatory-sandbox?language=en>

⁸ <https://e-qanun.az/framework/56660>

⁹ <https://www.cbar.az/press-release-4556/cbar-announces-application-dates-to-participate-in-regulatory-sandbox?language=en>

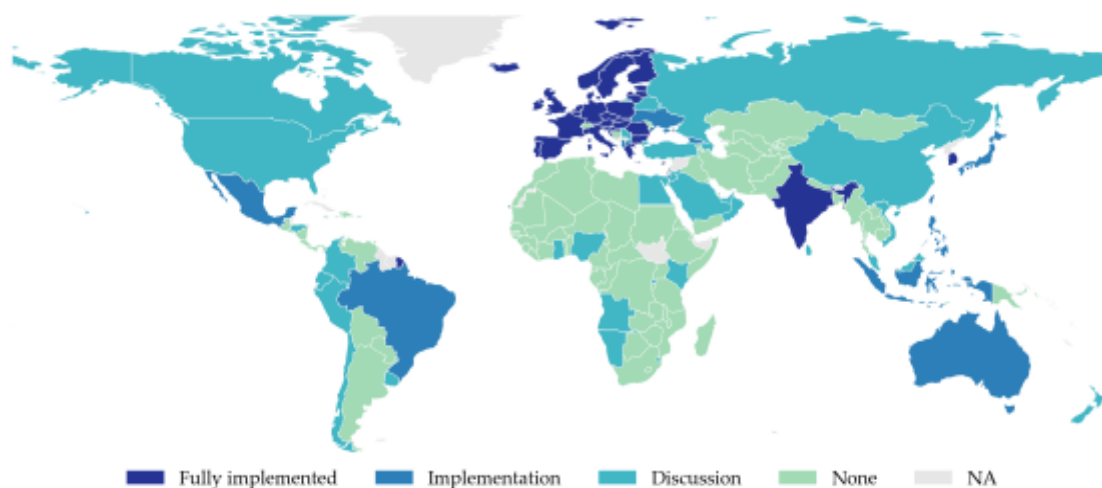


Figure 1. Government-led open banking regimes around the world in 2021

Source: Babina, et al. (2024).

In 2021, the situation regarding open banking in Azerbaijan was in the state of "discussion", but currently, as of 2024, it is possible to mark the situation regarding open banking in Azerbaijan as "implementation". The Law "On Payment Services and Payment Systems" was adopted in 2023, which includes the Payment Service Directive 2 (PSD2) legislation adopted in Europe and adapted by the Central Bank of the Republic of Azerbaijan on the financial sector and national legislation, which is why we evaluate it as "implementation". The law "On payment services and payment systems" supports the principles contained in the open banking model (Osmanov, 2021). However, despite the full implementation of the transition to open banking for all banks by 2022, we cannot mark it as "fully implemented" given the low level of awareness of open banking in society and the weak development of TPPs.

1. Relationship of parties in open banking – According to Article 62.1. of the Law "On Payment Services and Payment Systems," the Central Bank regulates the relationship between the parties participating in the open banking model and controls their activities. In addition to playing an important role in implementing the open banking model and adopting standards, the Central Bank of Azerbaijan Republic acts as both a regulatory and supporting financial institution (Osmanov, 2022). The development of services and products will lead to the fact that the participation of the Azerbaijan Central Bank, which is the supervisory authority in the interaction of the parties, is based on ensuring the control of compliance with security and legislative requirements, which will lead to a more future-oriented or completely innovative.

2. Security standards for Open Banking – In Azerbaijan, the ISO20022 standard has been implemented in the infrastructure of the National Payment System since 2021, and the transition was fully ensured in 2022 (CBAR, 2022). The exchange of

information in the Instant Payment System (IPS) is adapted to the ISO 20022 standard according to item 3.1. "Procedural rules for organizing the activities of participants in the Instant Payment System". In addition, according to item 3.3.4., the Open Banking module (Open Banking REST API) is used for obtaining financial information about customers. API standards related to open banking in Azerbaijan were developed based on the Berlin Group NextGenPSD2 standard. Notably, 75% of European banks follow Berlin Group standards (Berlin Group, n.d.).

3. Security of customer data in open banking – It is important to prevent security breaches that may occur while sharing financial information related to the client with the TPPs based on explicit consent and to protect the confidentiality and completeness of the data. To ensure security when sharing customer data in open banking, **Article 35. Authentication (PSD2 2015/2366 Article 97 Authentication)** process of the law "On Payment Services and Payment Systems" is applied:

- When the payer accesses the remote payment account (internet, phone, and other means);
- When the payment transaction is performed electronically;
- When accessing a remote payment account through various channels, during activities that lead to risks due to the presence of fraud and various abuses;
- The payment service provider must implement strong customer authentication, which includes elements dynamically linked to the amount of the transaction and the recipient of the funds when the payment transaction is carried out remotely in electronically;
- Requirements for the authentication process are determined by the Central Bank of Azerbaijan;
- The payment service provider servicing the payer's payment account shall ensure that the activity is performed based on the authentication procedure used by the payment initiation service provider and the account information service provider.

Legislation-based information, requests, and other issues related to customers' personal data are regulated by the law "**On Personal Data**". In open banking, the scope of services and the option of sharing financial information about customers with the TPPs is the full legal right of the payment service user, who has the right to share based on his explicit consent. The choice of information to be shared should be determined on a customer-based, self-selected basis, and the option to withdraw consent at any time should be provided. Acquisition, use, storage, and other approaches to personal data are regulated by *Article 8. Consent to collecting and processing of personal data about the subject* and *Article 9. Basic conditions for collecting and processing personal data* of the law "**On Personal Data**".

Increasing the use of open banking

Due to the statistical increase in the use of digital banking in Azerbaijan in recent years and the adaptability of the population to innovations, it is possible to note that with the introduction of open banking and its presentation to customers, the usability of this model will be relatively low at the initial stage but will increase in an upward direction. By creating awareness about the use of open banking within society, creating the right source of information about its benefits, and encouraging its use through promotional campaigns, the growth in the use of open banking will be faster. Emphasizing the advantages of using open banking, not only customer-based but also related to business subjects, and more manageable cash flow monitoring, we can mention the improvement of financial management.

Steps taken to increase the use of open banking in Azerbaijan:

- Implementation of information process related to open banking with banks, TPPs, CBAR, and mass media;
- Informing and supporting business subjects regarding the advantages and benefits they will get from applying for open banking;
- Special discounts or privileges are applied to purchasing financial services and products, as well as products and services obtained through open banking through commercial entities;
- Expanding open banking through mandatory implementation for certain services and products.
- Promoting open banking by introducing a project that will attract customer interest, such as "**VAT refund**"¹⁰ or a different project.

The "VAT refund" project was accepted by the implementation of Decree No. 414 of the President of the Republic of Azerbaijan, dated December 20, 2018. Nearly 3 million users were registered on the

¹⁰ The "VAT refund" project involves the refund of a certain part of the VAT paid for goods purchased in cash (5%) and non-cash (17.5%) from trade or catering facilities. The reason for implementing this project is that it is aimed at expanding non-cash payments and making the country's economy more transparent.

Evdgerial.az portal, and 253 million 405 thousand manats of VAT were refunded to users in the first six months of 2024¹¹. While this result was 154 million 178.8 thousand manats for 2023¹², it was 68.4 million in non-cash payments in 2022. From May 2020 to the end of 2021, 307.6 million manats of VAT were refunded¹³.

RESEARCH METHODOLOGY

The author used qualitative methodology (comparison and content analysis methods) to evaluate the current state of open banking in Azerbaijan, its development history, steps to increase its use potential, and the service potential of electronic money and payment organizations licensed by the Central Bank of the Republic of Azerbaijan. In general, a comparative analysis of the open banking services of the licensed electronic money and payment institutions was carried out, and along with this, examples and inconsistencies related to the approach to open banking were noted based on a systematic comparison. Also, the security, use, availability of explicit consent, API support, and potential and currently available open banking service support of customer data related to open banking were investigated in detail using the content analysis method for electronic money and payment organizations. The comparative and content analysis methods ensure that the research reflects the current real situation regarding open banking in Azerbaijan, the theoretical value of the obtained results, and the detailed analysis of the data.

Information about open banking was obtained from the official website of the Central Bank of the Republic of Azerbaijan and each electronic money and payment organization. The data necessary for the study were also obtained using mobile applications of organizations that support open banking.

RESULTS

A survey results on open banking in Azerbaijan (CBAR, 2021) and the current situation in the TPP sector

According to the evaluation of the "Roadmap for the Implementation of Open Banking" covering 2021-2025 by the Central Bank of the Republic of Azerbaijan, various statistics and approaches were obtained based on a survey of banks. According to the survey, 48% of banks stated that public and private information about customers is shared without any common technical platform or means. 96% of the banks participating in the survey support data sharing with APIs, while 44% support sharing with TPPs. Also, 92% of banks have a positive attitude towards implementing mutual activities with TPPs. In open banking, *explicit consent* is mandatory when sharing customer financial information and is considered one of the most important parts of this process.

¹¹ https://azertag.az/xeber/edv_nin_qaytarilmasi_uchun_portalda_3_milyona_yaxin_istifadechi_qeyde_alinib-3101006

¹² https://azertag.az/xeber/oten_il_istehlakchilara_qaytarilan_edv_nin_meblegi_154_milyon_manati_otub-2880952

¹³ https://azertag.az/xeber/istehlakchilara_400_milyon_manadan_chox_edv_meblegi_geri_qaytarilib-2538410

Consent under General Data Protection Regulation (GDPR) Article 4(11) is "any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her" (GDPR, 2016). The GDPR does not define the concept of explicit consent, but the European Data Protection Board (EDPB) states that "The term explicit refers to the way the data subject expresses consent" (EDPB 2020b, 20). Explicit consent is required under the GDPR in cases where there is a high risk related to the data type and the data used by the subject, and a high level of control is necessary (WBG, 2021).

According to the EDPB, the **explicit consent** should structurally contain the following features (EDPB 2020b):

- In addition to being goal-oriented and informative, the explicit consent must be clearly and comprehensibly presented to the client with the rules and other information;

- According to Article 4(11) of the GDPR, the data subject must give explicit consent in a completely free and independent manner without coercion, deception, intimidation, or other nuances;

- Withdrawal of explicit consent given by the data subject is legally the customer's right and is legally reflected in Article 7(3) of the GDPR. In addition, if explicit consent is given by the data subject with options such as "click, swipe, and keystroke," it should be possible to withdraw it in the same form and at any time. Also, explicit consent given through any web page or application interface must provide the client with the possibility of withdrawal through that interface, and the client should not suffer any financial loss during the withdrawal of consent;

- Confirmation of explicit consent by the data subject should not only involve digital acceptance with a simple click but should also include two-step verification. In this case, the confirmation of the explicit consent given by the data subject will be considered valid. During the two-stage verification, in connection with the confirmation of the explicit consent, the data controller (the controller) sends the legislation and other regulations containing the explicit consent to the data subject by email. The data subject then receives a clickable confirmation link or SMS message confirmation code upon acceptance of this agreement.

Below is an example of a brief description of explicit consent in the M10 fintech mobile application, which includes account information and payment initiation services related to open banking by PashaPay, an Electronic Money Institution licensed by the Central Bank of the Republic of Azerbaijan:

"When registering for the use of M10 fintech, sending and offering information about services and products to the customer based on the "Consent on Personal Data," collection, processing, and transfer of data within the framework of the agreement (also cross-border), information about the customer that carries Bank secrecy is transferred to Pasha Holding, its subsidiaries and it can be provided and accessed by other entities belonging to the Pasha Holding group, "Bakcell" LLC,

"Azerconnect" LLC, "Azercell" LLC and other third parties. Data is stored, archived, and destroyed within the framework of this consent agreement, as well as the right to withdraw consent by applying to PashaPay at the customer's request."

The M10 fintech explicit consent does not include the following according to the explicit consent structure outlined by the EDPB:

- Although the explicit consent given is by "keystroke," the customer must apply to request PashaPay to withdraw the explicit consent;

- Lack of two-step verification of explicit consent validation;

- Failure to provide explicit consent withdrawal functionality through the application interface;

- Not providing a choice of what data to share on open banking.

Also, other open banking license TPPs do not comply with the open consent structure defined by the EDPB and reflect the inconsistencies mentioned above.

Obtaining customer financial information based on the Privacy policy of M10 fintech¹⁴:

- Payment account information and details organization;

- Payment transaction, credit, debit and other payment card details;

- Details regarding the organization that is servicing to your accounts;

- Credit history and loan repayment schedule;

- Amounts of funds in your payment accounts.

In addition, another fintech named "CIB by FinDynamix" operates on open banking in Azerbaijan. However, this fintech has not obtained any license from the Central Bank of the Republic of Azerbaijan regarding implementing open banking operations. In addition, we can note that "CIB by FinDynamix" is a product of "CIBPay" and is licensed by the Central Bank to operate as a payment institution. In connection with the open banking services of "CIB" fintech, it is stated in clause 4.1. of the "User Agreement"¹⁵:

"If the bank card added by the User to the Program belongs to a bank with which the Company has signed an agreement on open banking, the User allows the card account information to be displayed in the Program and processed by the Company and does not object."

The AniPay¹⁶ portal, created by the Central Bank of Azerbaijan, includes implementing transfers and payments on the Ani Payment System via the mobile application and the web. AniPay mobile application provides clients of participating banks access to digital banking services through the Instant Payment System. AniPay mobile application provides open banking services to clients. AniPay functionality has already been presented to customers in the mobile applications of 15 listed banks (Ali Kerim, 2024). In addition, in connection with the use of AniPay functionality through the Banks' mobile applications, customers are required to confirm a

¹⁴ <https://m10.az/en/privacy-policy>

¹⁵ <https://findynamix.com/agreement.html>

¹⁶ <https://anipay.az/anipay-portal>

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consent application that carries bank secrecy and includes the sharing of personal data. Also, as an example, the expression "the right to withdraw the consent by approaching the bank" for the withdrawal of the consent given for AniPay through Birbank, which is a Kapital bank mobile application, is mentioned, which is completely contrary to the features of the open consent for open banking according to the EDPB.

Banks, when implementing open banking in Azerbaijan, mainly consider the advantages of transparency and increased customer satisfaction related to the sharing and management of customer information more than the sale of services and products (CBAR). However, with the introduction of open banking, the advantage that TPPs will create over banks with payment initiation and account information services may force banks to change their current course of action and act as data custodians.

In addition to the fact that 72% of banks do not provide their services and products to the TPPs,

legislation on the implementation of open banking was not adopted during this survey period. Although 60% of the surveyed banks associated the lack of regulation in Azerbaijan as the main issue in the application of open banking, even though a year has passed, the banks have not widely and continuously implemented information, news, and informative activities related to open banking. While the Central Bank encourages the public to use open banking through educational information and the importance of open banking, TPPs are determined to be the main party in promoting open banking (CBAR). Suppose it is possible to feel the low information process related to open banking around the immediate environment. In that case, it is difficult for an ordinary citizen to obtain information related to open banking without personal research. So, the parties involved in the open banking model must take serious steps to spread this understanding.

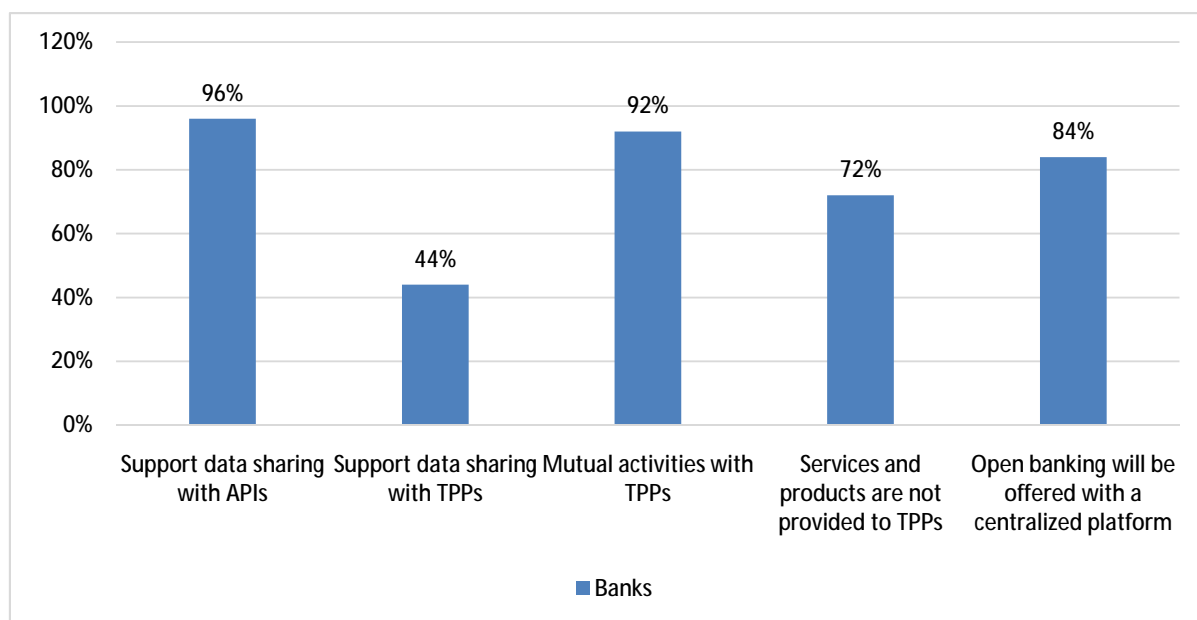


Figure 2. Results of the survey conducted by the Central Bank on open banking in 2021

Source: CBAR (2021).

There are expectations that up to 84% of banks will offer open banking to customers through the centralized platform of the Central Bank of the Republic of Azerbaijan. Because the number of fintechs in Azerbaijan is currently small, with the emergence and development of new fintech, CBAR acting as a supervisory body in open banking and applying and constantly developing more appropriate and innovative standards in security matters, it would be more appropriate to present them with a centralized platform. 40% of fintech participating in the conducted survey stated that API-based payment and financial services are provided to customers, but 20% stated that the level of information related to open banking was insufficient, 30% stated that information was available, and 10% said that API-based services are planned to be provided soon. 80% of fintech companies mentioned that information concerning payment services is obtained through the Central Bank of the

Republic of Azerbaijan and the Electronic Government Information System (EGIS). With the introduction of open banking, customers will gain transparency and increase their sales of services and products. Banks believe that it takes between 6 months and one year to implement open banking, while FinTech believes that open banking can be implemented within six months.

Today, FinTech responds to innovation and compliance more flexibly than banks. 40% of fintech includes the mandatory participation of all banks in implementing open banking, as well as the approach of initially gradually involving important banks in the system and then sequentially participating other banks (CBAR). Towards the end of 2022, the integration of the banks operating in Azerbaijan into the open banking platform was completed, and the integration of the TPPs was continued (Abbasov, 2022).

Table 1. Development of open banking institutions in the Republic of Azerbaijan

Electronic Money Institutions		Payment Institutions	
Name of the institution	The date of acquisition of the license	Name of the institution	The date of acquisition of the license
"A-Solutions Electronic Money Institution" LLC	16.05.2024	"Token Azərbaycan" LLC – Otero	16.05.2024
"United Payment" LLC	16.05.2024	"Global Innovations" LLC – Epoint	31.07.2024
"Modenis" LLC	05.06.2024	"Drakaris" LLC – Yığım	31.07.2024
"PashaPay" LLC	27.06.2024	"Multi Solutions" LLC – Msolution	28.08.2024
"Mobile Payment Solutions" LLC	08.07.2024	"M.A.X Sistemləri Plyus" LLC	12.09.2024
"Mpay" CJSC	11.07.2024	"CİBPAY" LLC	12.09.2024
"Paysis" LLC	11.07.2024	"Fizza Pay" LLC	28.08.2024
"Qoldenpey" OJSC	17.07.2024	"Kabox" LLC	18.09.2024
"PulPal" LLC	24.07.2024		
"K Group" LLC (BakıKart)	12.09.2024		
"Azerikard" LLC	12.09.2024		
"Payriff" CJSC	31.07.2024		
"Greentek Group" LLC	18.09.2024		
<i>Note: Licensed activity – carrying out cash inflow and/or outflow operations on the payment account, carrying out payment transactions by means of credit transfer, direct debit, payment card or other payment instruments, depositing funds to and/or from the payment account, credit transfers, direct executing payment transactions using credit transfer, direct debit, payment card or other similar payment instruments, acquiring of payment transactions, money remittances, issuing e-money and execution of payment operations with electronic money, payment initiation service, account information service, mediation service for conducting payment transactions, money transfers.</i>			

Source: <https://www.cbar.az/page-853/electronic-money-institutions>
<https://www.cbar.az/page-854/payment-institutions>

Table 2. Assessment of open banking services of electronic money organizations and payment organizations licensed by the Central Bank of the Republic of Azerbaijan

TPPs	API	Consent/ Explicit consent	TPPs established by banks	TPPs which has an open banking service license	The potential of future open banking services
1	2	3	4	5	6
AniPay (Anipay)	Yes	Yes	Yes, Central Bank of Azerbaijan Republic	Yes	*- (AISP/PISP)
Akart ("A-Solutions Electronic Money Institution" LLC)	Yes	Yes	Yes, Pasha Bank *Azercell *AzInTelecom *Visa (other partners)	Yes	*- (AISP/PISP)
United Payment "United Payment" LLC	Yes	Yes	No	No	Yes

Table 2: Continued

1	2	3	4	5	6
eManat ("Modenis" LLC)	Yes	-/ No	No	No	Yes
M10 ("PashaPay" LLC)	Yes	Yes ¹⁷	Yes, Kapital Bank	Yes	*- (AISP/PISP)
Portmanat "Mobile Payment Solutions" LLC	Yes	Yes/No	No	No	Yes
Mpay "Mpay" CJSC	Yes	Yes/ No	No	No	Yes
Epul.az "Paysis" LLC	Yes	Yes/ No	No	No	Yes
PulPal "PulPal" LLC	Yes	Yes/ No	No	Yes	*- (PISP)
Goldenpay.az Hesab.az "Goldenpay" OJSC	Yes	Yes	No	Yes	*- (AISP)
Baki Kart "K Group" LLC	Yes	-	No	No	No
Tezpay Tezödə "Azerikard" LLC	Yes	Yes/ No	No, *"Azerikard" LLC is the first processing centre in the Republic of Azerbaijan	No	Yes
Payriff "Payriff" CJSC	Yes	Yes/ No	No	No	Yes
Greentekpay "Greentek Group" LLC	Yes	Yes/ No	No *Partnership – YapıKrediBank, Unibank	Yes	*- (PISP)
Odero "Token Azərbaycan" LLC"	Yes	Yes/ No	No	No	Yes
Epoint "Global Innovations" LLC – Epoint	Yes	Yes/ No	No	No	Yes
Yığım "Drakaris" LLC – Yığım	Yes	-	No	No	Yes
Msolution "Multi Solutions" LLC	Yes	-	No	Yes	*- (AISP/PISP)
Maxsystems.az Pay2net.az Exezine.az "M.A.X Sistemləri Plyus" LLC	Yes	Yes/ No	No	No	Yes
Cibpay "CİBPAY" LLC	Yes	-	No	No	Yes
Fpay "Fizza Pay" LLC	Yes	Yes	No	Yes	*- (PISP)
Kashpay "Kabox" LLC	-	-	-	-	-

Note: *An open banking service license AISP/PISP is currently available.

Source: Data collected by the author.

¹⁷ Information about privacy and explicit consent is provided to users within the M10 mobile application. <https://m10.az/istifade-qaydaları>

The author encountered some limitations while collecting the necessary data for the study. In particular, Yığım "Drakarıs" LLC's information about the agreement was unavailable due to the web page not working. Msolution "Multi Solutions" LLC and Cibpay "CİBPAY" LLC information about the agreement was unavailable on the website. There is no data availability because the Baki Kart "K Group" LLC mobile application is not working. Although "Kabox LLC" is licensed as a payment institution, information is unavailable as it does not have a website.

AniPay, "Multi Solutions" LLC, "PashaPay" LLC and "A-Solutions Electronic Money Institution" LLC are authorized to operate as an open banking account information service and payment initiation service provider. Like TPPs, M10 (PashaPay) digital wallet and Akart (Azercell), which was established by the joint

activities of Pasha Bank, Visa, and AzInTelecom, will introduce digital card service to customers. Greentekpay "Greentek Group" LLC, "Pulpal" LLC and Fpay "Fizza Pay" LLC are licensed as a payment initiation service provider for open banking, and "Goldenpay" OJSC is licensed as an account information service provider. 38% of licensed electronic money institutions and payment institutions can provide open banking services to customers. Only 63% of TPPs providing open banking services include explicit consent. Others generally include a customer agreement and privacy policy on transactions. Payment organizations can make digital payments with intermediary services, and TPPs with an electronic money organization license have the potential to manage, control, and make payments through the Instant Payment System for open banking services.

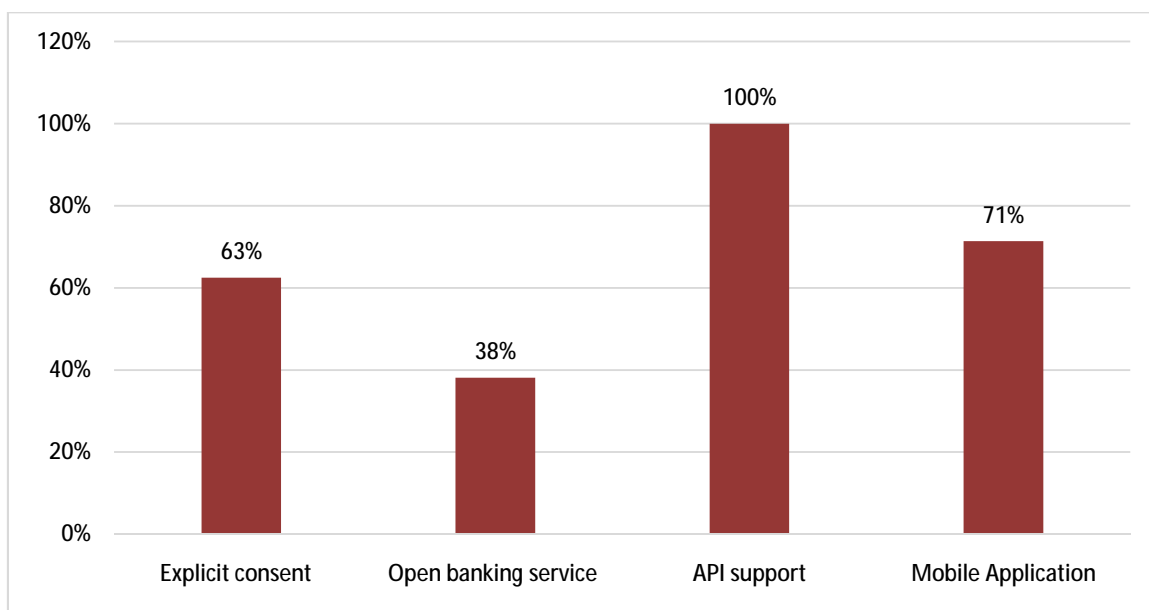


Figure 3. **Open banking service capabilities of electronic money institutions and payment institutions (August 2024)**

Source: Data processed by the author.

Not only did no bank participate in the open banking survey we sent to the Azerbaijani banks, but they also did not respond in an informative manner. Only AzerTurkBank emphasized that it does not participate in such surveys. The availability of information on the steps and activities related to open banking in Azerbaijan for 2021-2024 is at a low level.

DISCUSSION

The first step regarding introducing open banking in Azerbaijan was in 2021. As of 2024, open banking legislation, security, and responsibilities of parties participating in open banking have been clarified, and licenses have been provided to TPPs. However, compared with the United Kingdom and European Union (EU) legislation, open banking legislation was adopted after a 6-year delay in Azerbaijan. Based on the survey conducted by the Central Bank in 2021 and the real situation in 2024, it is possible to note that the legal-based problem mentioned as 60% has been fully resolved.

It is possible to note that the number of TPPs that include open banking service is 8 in Azerbaijan, and when compared to the United Kingdom, the number of TPPs on open banking is 232. As of July 2024, the number of people using open banking was 10 million in the United Kingdom (Open Banking marks, 2024), which is equal to the population of Azerbaijan, in addition to the number of TPPs being 26 times more. The currently limited range of open banking services and products does not allow us to use the expression "fully implemented" at the application level.

Explicit consent is one of the fundamental parts of using open banking and must include the structural features covered by the EDPB. Challenges such as two-step verification, easy withdrawal of consent, and lack of choice about what financial information is shared have a direct negative impact on the customer experience and usability of open banking. Also, it is a serious nuance that there is no free choice during the sharing of financial information and that the list of information to be obtained

by the TPPs is presented with consent as a template. The current TPPs in Azerbaijan do not cover these structural features, which remains the main problem. This problem should be solved with strict control and instructions initiated by the Central Bank.

According to the research, the future open banking potential of current TPPs is 80%. In addition, the mobile application ownership rate of TPPs is rated as 71%, and API support is rated as 100%. However, although all TPPs have API support, only TPPs supporting open banking services are considered to contain the Berlin Group API standard. The development of independent TPPs on open banking is currently weak in Azerbaijan, and certain steps must be taken to increase it. In general, it is possible to see the formation of development and innovative approaches based on competition. However, competition in open banking between parties is low in Azerbaijan, and 37.5% (3 of 8) of licensed TPPs of open banking services were established by banks, which dominate the financial sector.

The availability of literature and general information on open banking in Azerbaijan, as well as open banking services, products, and other infographic information provided by licensed TPPs, is currently low. In addition, none of the banks responded to our survey on open banking. This lack of response has made it challenging to conduct thorough research that considers all the different aspects and activities related to open banking.

CONCLUSION

Accelerating the adoption of open banking worldwide plays a crucial role in laying the foundation for future open finance and open data concepts, which also are one of the main factors that include its absolute application. Open banking is an approach that increases the accessibility of financial services and products while allowing customers to control their data and share it securely with third-party providers. The accessibility of

information on the implementation and current progress of open banking is high in many countries worldwide; however, it remains comparatively low for Azerbaijan. This article reflects a comprehensive study encompassing all stages of implementing open banking in Azerbaijan.

The years 2023-2024 are the initial stage for implementing open banking in Azerbaijan and its further development. Over the past two years, the Central Bank of the Republic of Azerbaijan has taken legislative, security, and license-based steps to expand the scope of open banking. In 2024, many existing fintech or third-party suppliers (TPPs) in the financial sector have successfully acquired electronic money institution or payment institution licenses. Notably, 38.1% of TPPs have included open banking services, which is expected to accelerate the development of the open banking model.

While the steps to be implemented to increase the use of open banking in Azerbaijan are mentioned in detail, the main nuance, the price difference, security, and trust, will significantly affect users' inclination to open banking. Azerbaijan's current open banking development follows the regulatory-based European model and the Berlin Group standard for API security. It is considered more secure than other market-based and hybrid approaches in ensuring customer safety in open banking.

For the faster development of the open banking model in Azerbaijan, features such as ease of use, speed of transactions, security, elimination of forced dependence on multiple banking applications using TPPs, and the ability to control personal financial data features should be presented to the society with social networks, and other by means. As we mentioned the high role of banks in the high use of digital banking, TPPs should play the main role in increasing the use of open banking, and the Central Bank of the Republic of Azerbaijan as a regulatory body is of great importance in the expansion of the use of open banking.

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