Financial ecosystems: analysis and development paths

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Abstract. This research aims to identify the role of ecosystems in the modern financial world. Banks are most actively involved in the formation of ecosystems, concentrating various offers around their traditional areas of activity. The study of ecosystem strategies used by banks revealed the areas that banks consider as the main ones when forming their own ecosystems. The reasons that caused an active interest in the formation of ecosystems by banks are studied. The analysis of the leading financial ecosystems of countries, including the Russian Federation, is made. The main models of banking ecosystems on the market and their features are shown. Factors that have a stimulating effect on the development of ecosystems are identified. Based on this information, General summary conclusions are formulated.

1. Introduction
The concept of "ecosystem" can be viewed from different perspectives. The ecosystem at the level of a subject attribute is built on the principle of interaction of these subjects regarding the creation of a certain value chain. An ecosystem at the object attribute level is a seamlessly integrated offering of a wide range of products and services. Ecosystem as a synthesis of a subject-object trait – self-developing and adapting to the needs of society [1].

The forms of offering products and services to customers are constantly evolving, passing through three stages, from the marketplace, platform approach to the ecosystem approach. The emergence of financial systems created by banks is becoming a trend in the development of the banking market. It is becoming increasingly difficult for banks to compete for customers. Most banks have similar rates for the same products and services, so new solutions that give competitive advantages are required. The essence of the financial ecosystem is to create a range of diverse services, primarily focusing the client's attention on key products and services. Reducing the cost of attracting consumers to friendly services and increasing customer loyalty are the key positions of the ecosystem approach. The financial ecosystem creates a comfortable environment and opportunities for quantitative and qualitative growth. Perhaps the development of ecosystems and superapps will become one of the main trends in the next few years. An important fact is the formation of values and the value approach as the basis for the formation of a new market model [2].

2. Methodology
The purpose of this research is to study current trends, problems and prospects for the development of financial ecosystems in different countries. The object of research is the digital financial ecosystem. The basis of this research is based on analysis and synthesis as the fundamental methods used in the formation of a scientific article. The result will be the formation of new, systematic and generalized knowledge about the prospects and opportunities for further development of financial ecosystems.
3. Research result
A study conducted by Accenture showed a huge interest of banks in ecosystems as a driver of development. 89% of banks surveyed expect that customer-oriented ecosystems will be one of the most obvious opportunities for banks to strengthen their positions in the ecosystem market by providing value offers to their customers. Region, which are based on the banks, forming their own ecosystem strategy:

1. Business services (58% of banks surveyed).
2. Housing (38% of banks surveyed).
3. Savings (38% of banks surveyed).
4. Utilities (38% of banks surveyed).
5. Retail trade (36% of banks surveyed).
6. Mobile services (28% of banks surveyed).
7. Public services (25% of banks surveyed).
8. Health (21% of banks surveyed) [3].

The expansion of the ecosystem by attracting non-banking services is dictated by several reasons. Let's look at the main positions.

Increased competition in the traditional banking market. There is a struggle for the client. Regulation by the Central Bank is increasing, and competition with non-banking organizations is getting tougher.

There is a search for other sources of income, diversification of existing income.

Ecosystems create serious barriers for new entrants to enter the market. New entrants must not only offer the best possible core product, but also compete with existing systems of independent and complementary services, both financial and non-financial.

Let's pay attention to the limitations associated with the formation and promotion of the financial ecosystem. First of all, it is an investment. Most traditional banks do not have large-scale capital for this purpose. The second limitation is the need for a complete review of key business processes. The third constraint will be the emergence of new risks and the need to assess and manage them. The best way to solve such problems is to create a "niche" approach to market segmentation. You need to clearly define your unique sales offer and create a high-quality seamless service, focusing on a specific segment of customers or on a specialized part of the market [4].

The United States and China have made significant progress in creating financial ecosystems. Let's look at the largest ecosystems and their characteristics.

In 2019, the American banking system Citi was recognized as one of the best financial ecosystems in the world, in Latin America, Western Europe, the Asia-Pacific region, the middle East and Africa, with an asset value of approximately 1.8 trillion US dollars. Aggressive expansion in Asia in the digital format began in 2017, the concentration of "digitization" of the business is in the credit card segment. Along with the development of the digital ecosystem, there is a proportional reduction in branches. Asia is the fastest growing region for the development of Citi banking services, Much attention is paid to social media platforms within the framework of the ecosystem development, the main focus is on Facebook. There was a high profit growth, in some regions it is about 50% per quarter, which is a very impressive indicator of the success of the ecosystem.

The best consumer financial ecosystem in the world was named in 2019 by Standard Chartered. Its assets amount to 688.762 billion US dollars. The ecosystem was launched in 2016. the main goal of its introduction was to expand trade, Commerce and investment in Asia, Africa and the middle East. These are the main priority regions for the ecosystem of this Bank. The Bank cooperates with the Ariba network as part of the ecosystem formation. The ecosystem is aimed at providing services to all segments of its customers and is characterized by a fully integrated offer.

The most attractive financial ecosystem in North America in 2019 is Wells Fargo. With assets of $ 1.896 trillion, the Bank is the largest agricultural lender in the United States and works with the national renewable energy laboratory in Golden. A distinctive feature is also the promotion of green economy projects. This financial ecosystem includes the Agrotech startup accelerator Thrive Agtech.
Also noted is the Polish financial ecosystem, which is the largest in Eastern and Central Europe. This is the mBank ecosystem. The ecosystem focuses on small commercial businesses. Its development is due to the preference of many clients for the digital form of invoices and contracts. The presence of mPower Business Starter in the ecosystem allows firms to register via the Bank's website, and then automatically open a current account, and it is also possible to receive the entire line of banking products and services online.

Ant Financial is one of the largest financial ecosystems by capitalization. The company was originally created as Alibaba. The company's ecosystem includes more than 600 million users and covers 110 million partners from 15 countries. The ecosystem's financial services include loans, insurance, and investment in a money market Fund. Technical services are offered: biometric identification, image recognition tools, and so on.

The Japanese Rakuten ecosystem, which has a market capitalization of 10 billion US dollars, specializes in e-Commerce, Taking into account the ongoing work on the implementation of the telecommunications business, the Walmart partnership of the Asahi insurance business, the platform will fully correspond to the status of the financial ecosystem.

Facebook Pay is not a Bank, but it successfully promotes payment mechanisms. Acts as the Issuer of the Libra cryptocurrency. Facebook's strategic priority is to develop the financial ecosystem.

Amazon Pay is also not fully financial. This is a large-scale ecosystem that includes financial services:
- Mobile wallet.
- Cash deposits (Amazon Cash). The service connects offline and online trading, and it is possible to top up digital accounts (in cash) in partner retail stores.
- Lending. Amazon offers business loans from $ 1,000 to $ 750,000 (for one year), but the offer only works for registered Amazon sellers.
- Amazon Reload. Offers cashback for customers using an Amazon digital debit card.
- Amazon Protect. The insurance service is offered jointly with the insurance company Warranty Group.
- Amazon Store Card. Credit cards that can be used in retail and on certain websites.
- Android Pay. The payment system for the Android operating system is integrated into Google Pay and is part of its ecosystem.

The Chinese payment system WeChat Pay is in a transition stage. There is an active transformation into the financial ecosystem, and the company is also planning to expand in India. It includes a payment system and a number of related services. Provides an opportunity to book hotel rooms, buy transport tickets.

The American Bank Goldman Sachs forms an electronic credit platform together with Amazon, works with Apple. The Bank provides insurance and assumes credit risks. Combining three large-scale organizations into one ecosystem is the world's largest financial ecosystem [5].

Russia is represented by two major ecosystems: Sberbank and Tinkoff Bank. At the beginning of 2020, Sberbank had 48 ecosystem services that can be accessed via SberID, a single sign-on system for the Bank's services. About 6 million Sberbank customers use SberID. Sberbank plans to develop in the same way as major global giants. Sberbank's ecosystem will increase its own infrastructure to meet a wider range of consumer needs. The transformation of an ordinary Bank into such a multi-faceted platform will lead to the creation of new companies and strategic collaborations. Tinkoff Bank focuses more on the segment of consumer loans and Commission business. The Bank develops the ecosystem Tinkoff.ru, which provides financial and lifestyle services. In addition to classic banking products, it includes investments, travel, business services, mortgages, insurance, mobile operator, entertainment, and education. The Bank does not have branches: all clients are served remotely via online channels and a contact center. The Bank's cloud-based call center employs more than 10,000 employees, making it one of the largest in Europe. The core of the ecosystem is Tinkoff Bank, founded in 2006, an online Bank that serves more than 10 million customers [6].
4. Discussion of results
Locality of banking markets is one of the problems of today. Implementation of financial ecosystems is uneven. The Asia-Pacific region is more interested in promoting ecosystem models than North American and European banks.

There are three models of ecosystems in the financial services market:
- The us-China model, in which innovations are developed within large technology companies such as Google, Apple or Amazon. Financial services are developed separately and are just one of many systems. The reasons why such companies succeed in financial services are obvious. Companies have a huge amount of data about customers and the ability to handle them. An organized infrastructure supported by constant innovation makes it possible to generate new solutions for the market. The company's data is completely digital, and they do not need to go through the path of digitalization, as many traditional banks do. Customers show interest in their solutions and suggestions. Based on this, many customers are ready to switch to financial products of technology companies.
- The Russian model, in which the Bank is the center of the ecosystem, and traditional financial intermediaries become competitors for the Bank. Financial services is the client's entry point into the ecosystem, where the Bank closes the user and offers services to partner companies that are already in the ecosystem or are gradually attracted according to customer requests.
- European model. It focuses on consumers, regulators, and startups. Thanks to the active actions of the regulator, startups can connect to investment structures and offer new client solutions for the consumer. European clients are proactive, they are able and willing to choose for themselves. Banks lose contact with the client. And, if earlier the brand played a big role, now new technological solutions are more important.

Factors that have a stimulating effect on the development of ecosystems are:
- Client orientation. The growth of digital competence and equipment of consumers dictates new forms of banking business and creates new needs for Bank customers.
- Changing the position of banking sector regulation. Initiatives for open banking services through the API are aimed at creating new models of interaction, increasing the transparency of the banking sector, forming new payment institutions, increasing competition, and increasing the innovative activity of the sector.

There are several ways that banking ecosystems can generate value:
- Using existing primary connections. The focus is on cross-sales growth.
- Based on creating and generating new revenue. Banks offer ecosystem partners data from their customer base in exchange for a Commission fee.
- Optimize the number of customers by reducing their churn. Attracting additional customer interest is expected by offering them a wide range of different services in a wide format [7].
- Providing a wide range of service opportunities for customers based on long-term user experience [8].

5. Conclusion
Summing up, you can identify the following results. The global financial crisis has created a serious problem for the banking sector in many countries - a decline in its profitability. Monetary policy in these countries was aimed at supporting banks, but low interest rates had an impact on the fall in net interest margins. A number of new problems have also been identified as a result of the coronavirus outbreak, which is likely to continue the trend of low incomes for a long period of time [9]. The ongoing changes make it necessary to search for optimal scenarios for the development of banking business. One of them is the application of an ecosystem approach aimed at creating concentrated value for customers. Building an ecosystem carries with it serious risks of investment, technological properties. However, the largest players in the financial and non-financial markets are currently demonstrating the success of the ecosystem approach, which is a serious incentive for other participants in the banking market who are interested in increasing their competitiveness, sustainability and increasing profits.
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