

## SOFTWARE FOR NEOBANKING: MODERN WHITE-LABEL SOLUTIONS IN FINTECH INDUSTRY

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*In the dynamic, unpredictable and so changeable modern world, all spheres of life are facing changes. The banking system was not left aside. Implementing innovative fintech solutions was the only option for traditional banking institutions to stay afloat. That's why the new types of banking institutions - neobanks appeared. The term "neobank", which originated in 2017, refers to a new type of financial institution that provides modern, fast, and flexible services right in a smartphone or messenger. White-label financial services allow fintech and third parties to showcase a stylish, company-branded front end using an established bank license, regulatory compliance, and back-end technology to offer core banking features that compete with large institutions.*

*The article analyzes the advantages and further prospects of the development of neobanks, the difference between white-label and baas solutions, as well as the principle of operation of each of the systems. An analysis of the modern market of platform developers for neobanks was carried out, which made it possible to identify the largest market players from European and Scandinavian countries. As a result of the study, the features of each of the developers of platforms for neobanks and their contribution to the development of the world economy were determined. Also, the article highlights the factors that make white-label solutions the future of online banking.*

*The article mentions important conditions for the development of white-label solutions for neobanks, traditional and non-traditional banks – the improvement of the regulatory framework that would determine the legal status of such kinds of institutions, as well as the conditions for licensing and regulation of their activities. In the article, the most popular providers of neobanks are described. The conducted comparative analysis gave the opportunity to highlight the factors that provide these companies success, as well as to name the current market leaders.*

*Overall, the study made it possible to identify the advantages, disadvantages, and risks of neobanks, and determine factors that provide stable growth for white-label neobanks as well as prospects for their development.*

**Keywords:** *neobanking, software for neobanks, white-label services, banking model, software development*

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### INTRODUCTION

The choice of fintech solutions for business is a rather complex process related to ensuring cyber security, compliance with legal regulations and customization to the specific needs of the partner. In fintech, there is a category of solutions designed to take the headache out of business owners and give them the tools to close their financial needs. It is about Banking-as-a-Service – the system in which traditional banks provide their banking infrastructure to third parties and allow companies such as fintech access this information. And the last use this access to develop innovative financial products based on already existing infrastructure. One of the BaaS cooperation models that is gradually developing in the fintech market is White Label.

In a general sense, white-label is a type of partnership in which one company produces goods or services, and the other sells them under its own brand. This approach allows each of the partners to do what they do best. The seller sells, the manufacturer produces. This banking model meets the needs of not only large non-financial organizations, but also neobanks and fintech companies without a banking license.

White-label neobank refers to an end-to-end banking model that uses data provided by traditional financial institutions. This is a collaboration where traditional banks give third-party companies, such as fintech companies, access to their application programming

interfaces (APIs). And companies use this access to develop innovative financial products based on already existing infrastructure.

White-label neobank platforms allow companies without banking licenses to create unique financial products using the licenses of traditional banks. This is called an externally focused neobank, while stand-alone neobanks operating under a banking license are called full-fledged neobanks. Neobank providers create payment platforms that are fully customizable to their requirements and companies can use this software to market their products under their own unique brands. BaaS will benefit any business that wants to build financial functionality into their products, but lacks the time, money and expertise to do so.

A neobank may be deemed as an application on a mobile device that avail to manage a user's finances. All the user has to do is to register in the app. In addition, financial education services including budget planners are commonly offered by such applications. Nevertheless, in case a user wishes to manage his bank account and pay through the neobank with money held in a traditional bank, it will be vital for him to provide also personal data associated with the bank account.

### ANALYSIS OF LATEST RESEARCH AND PUBLICATIONS

The essence of white-label solutions, its effectiveness in banking system is widely considered in modern economic literature by both domestic and foreign scientists. The issue of the peculiarities of the formation and functioning of neobanks in Ukraine and the world, as well as the identification of the prospects for their further development, is dedicated works of such Ukrainian scientists, as: Sofiya Teslyuk, Nataliya Matviychuk, Oksana Derkach, Nataliya Korkh, Another scholars from Federal University of Bahia Franklin Silva, Renata Souza and Ivan Machado conducted research on taming and unveiling software reuse opportunities through white-label software in startups, which brought the crucial characteristics and factors to support white label software improvements. Based on the existing data, we consider it necessary to investigate in more detail the question of the essence of software for neobanking and white-label solutions developers, features of functioning, advantages and disadvantages of their activity. The current prospects for the development of neobanks and the providers of neobanking software in Ukraine, as well as the regulatory and legal security of their activities, are still relevant.

### SETTING OBJECTIVES

The purpose of the work is to research modern fintech solutions, describe and compare the most famous software developers for neobanks.

### RESEARCH METHODS

In the process of research, methods of system and comparative analysis were used.

### RESEARCH RESULTS

Companies prefer white-label solutions generally because of the versatility of this solution. The vendor offers SaaS, not a fixed product that only has to fit the brand structure in its existing form. A white-label solution is the idea of a service that is customized for the client, so the service itself can meet any needs of a bank, non-bank, applicant or financial solution. The service usually includes: rebranding of the service, high-quality adaptation, reference materials with clearly defined user paths, professional technical. support, ongoing maintenance and updates when needed.

Creating products using white-label platforms and using API interfaces has many advantages:

1. Resource saving and faster startup. Developing your own solution is an expensive, time-consuming and long-term process. For this, the company will need an experienced IT team, time for testing and fixing errors. Instead, a ready-made platform will cost much less and will work faster.

2. Fast access to the market and extended offers. The use of white-label platforms allows companies to go to market faster, add and update the necessary functions. Rather than spending a lot of time creating them from scratch. This will ensure the innovation and relevance of the final product.

3. Know the product from the beginning. When creating a program by yourself, most likely, there will be many unexpected moments. The fintech industry is rapidly changing and the product development process can take 1-2 years. For this reason, by the time the solution is launched, client's new version may be out of date and not meet customer expectations.

4. Understanding your budget from the start. Providers of ready-made white-label solutions offer packages of solutions depending on the selected module, number of integrations or budget. In this way, the customer will be able to accurately calculate his costs from the start.

Currently, there are many neobank software developers. According to Statista.com, in February 2020, there were 8,775 financial technology startups in the Americas, 7,385 in Europe, the Middle East and Africa, and 4,765 in the Asia-Pacific region [1]. Below in table 1, there are some of the most popular providers' names of neobanks, in particular from European and Scandinavian countries, described.

*Table 1 – The comparative analysis of the most popular neobanks developers*

Company	Clients	Unique offers	Peculiarities
Radar Payments	all types of clients	support for SWIFT instant payments, fraud management, payment portal solutions for on-the-go commerce	special tool "Tippay"
Opherium	banks, enterprises, governments	OPEX, internal liquidity reserve token	security of the customers' data, special tool "Opherium SDK"
Mambu	fintechs, neobanks, traditional and non-traditional banks	online, private and core banking, multi-user accounts	CRM, API integration with Backbase, Ondato, Zenoo, Infinitus
Limepay	merchants	payment remains on the merchant's website, purchase behaviour insights, no interest, a late payment fee and flexible repayment options, expanding store variety	integration with merchant checkouts on the merchant site
SatchelPay	private individuals, international businesses, financial institutions, online merchants, legal entities, enterprises	virtual personal, business and merchants IBAN accounts	facilitating global payment transactions
Meniga	all types of clients	data aggregation, customer engagement strategies, data analytics, cashflow assistant, carbon insights, UX workshops	environmental initiatives
Findity	all types of clients	instant capturing and distributing data	concern for "paperwork" related to local regulations, demo version

*Source: developed by the authors*

Switzerland-based payment processing provider Radar Payments. It is one of the largest white-label platforms on the current market and a leading innovative service provider offering universal solutions. RadarPayments works with all types of customers: merchants, payment service providers (PSPs), banks, non-banks, niche solutions, acquirers, issuers and anyone interested in their services. The company offers consulting services and a single platform for end-to-end multi-channel processing that enables the adoption of most widely used payment methods, delivered on a PaaS, SaaS or fully managed service model. The

client takes full ownership of the selected payment program and data, without the need to create and maintain the program's infrastructure.

RadarPayments, with one of its flagship solutions, Tippay, which was launched in 2021, offers banks a solution that provides greater convenience for tipping. The tool helps banks reach potential customers as well as generate additional revenue by charging a small fee for each tip provided. RadarPayments also offers several payment options that are secure, customer-centric and meet their specifications, but at a good price. The company's offerings include integrated and contactless payment solutions, support for SWIFT instant payments, fraud management, payment portal solutions for on-the-go commerce [2].

Ophtherium is a powerful, safe and cost-effective operating system for digital banking registered in Estonia and having headquarters in the USA. The main goal of the company is the development of a global blockchain financial infrastructure that will be available to any institution or individual user around the world. Ophtherium offers a SaaS platform that can be integrated into any existing infrastructure and can be customized according to the client's needs.

The company provides IT consulting and IT integration services to banks, enterprises and governments. The company's products are innovative white label NeoBank and Regtech SaaS solutions for digital banking. Ophtherium services include mobile and white-label web applications, pluggable interfaces, Ophtherium SDK. Ophtherium products also allow banks and corporations to operate under their own or third-party APIs and banking licenses. A great advantage of the company is the concern for the security of its customers' data. Working with blockchain and AI-based processes, they guarantee no security breaches, hacker attacks, or theft of customers' personal information. The safety and ease of customer interaction with financial institutions, including non-banks, is a top priority for this team. Company offers: e-wallet/mobile app, digital asset management, OPEX, internal liquidity reserve token [3].

Mambu is a German software company that allows banks and financial institutions to conduct and manage financial transactions. It is a SaaS, cloud-native, API-driven banking and financial services platform, which is designed to power financial innovation, to bring solutions to market faster, drive down cost barriers and allow ecosystems to expand. The company's clients are fintechs, neobanks, traditional and non-traditional banks. Businesses can design, configure, and deploy banking and credit services using an integrated, composite banking system by interacting with multiple external resources through APIs.

With them are Businesswire, Mambu and Volante Technologies, which is a global cloud provider payments and solutions for exchange financial reports, informed about the alliance. This radical decision should help banks and lenders quickly modernize their banking and payment infrastructures. The strategic partnership will allow joint customers to accelerate the launch of new payment products and services without the need to remove and replace existing systems. Company offers: online, private and core banking, multi-user accounts, CRM, API integration with Backbase, Ondato, Zenoo, Infinitus, etc [4].

Limepay is FinTech company from Australia. The main focus of this company is merchants. Making the merchant-customer financial relationship pleasant, easier and more accessible are main objectives of the company. Limepay is an innovative, brand-first payment platform that gives control, knowledge and ownership of the customer experience back to brands. After complete rebranding, company moved from a standalone offering to a white-label solution. Today the company is a brand-first, big-thinking, future-forward payment technology with customer experience at its heart. Company offers: innovative once-off, split, and repeating payment options that change the way your customers and their customers do business, fully white-labelled design and flexible cart integration are just a small part of all advantages of the company [5].

UAB SatchelPay is a Lithuanian institution that focuses on facilitating global payment transactions. The company's clients are generally private individuals, international businesses, and financial institutions. Nevertheless, SatchelPal also works with online merchants, legal entities, and entrepreneurs. The main company's services are currency

exchange, international payments, and software development. Besides, the company provides customization of the cards, the ability to turn on contactless payments, and adaptation of card fees to your service besides brand-matched design. The availability of all financial services is SatchelPal's priority, as well as their flawless treatment and management of physical and virtual MasterCard cards. Company offers: virtual personal IBAN accounts, virtual business IBAN accounts, merchant accounts with IBAN, physical prepaid cards, virtual prepaid cards [6].

Meniga is a software company founded in Reykjavík, Iceland in 2009. It's a global leader of white-label Digital Banking solutions – serving over 100M banking customers across 30 countries. Meniga's portfolio of products includes personal finance management, carbon insight services, automated real-time notifications, predictive analytics and personalized engagement technologies, targeted rewards and consumer data analytics. With more than 10 years on the market, Meniga has already won the hearts of many banks around the world, such as ING Direct, mBank or Santander, but it continues to provide its white-label solutions to non-banks and customers directly. The company has a strong stance on environmental initiatives, so it offers refunds or Help-the-planet solutions for customers, and businesses can easily inform their customers about carbon emissions and promote refunds. The team is very successful in their field and has won FinTech awards almost every year since 2011. Company offers: data management: consolidation, enrichment and optimization of financial data for both companies and individuals, data aggregation, customer engagement strategies, loyalty formation, data analytics, personalized engagement strategies, digital banking APIs, cashflow assistant, carbon insights, UX workshops [7].

Sweden SaaS expense management platform for financial organizations and neobanks called Findity. It is an expense management software designed for living. The platform provides customers with ability to manage their expenses, milages and per diems in one place fully compliant and automated. One of the biggest advantages of this company is their concern for "paperwork" related to local regulations. Whenever a team uses Findity as their white-label solution and creates their own offering with it, all legal issues are covered by the provider, regardless of the country the client is based in. Working with all types of clients, including small neobanks and start-up teams, Findity has a strong focus on the corporate world where employers require a reliable accounting and payroll solution. This means that this software can be easily incorporated into the day-to-day activities of any team, from a small challenger bank to a huge corporation with thousands of employees; and in both cases it will benefit the client and its end users. Also, if you are interested in this company's product there is a brilliant opportunity to try the demo version. Company offers: personal expense management, instant capturing and distributing data, which means lightning-fast payouts and full oversight of real-time transactions [8].

The analysis of these neobanking software developers showed that all of them offer SaaS platforms, digital banking APIs, mobile and wight-label web applications, integrated and contactless payment solutions. Furthermore, each company provide their clients with IT consulting and IT integration services. Digital asset management is offered only by a few companies, such as Ophtherium, Limepay, Meniga and Findity.

Every company has their own peculiarities, that sets it apart from othersю For instance, Findity helps to handle with all legal issues and documentation, even if their client is in another country. This option would be highly valuable for those banking institutions and clients with lots of administrative work, or for those who do not intend to carry that out by themselves. Meniga pays a lot of attention to environmental initiatives, thus provide a wide range of Help-the-planet solutions for customers, and businesses. This provider of neobanks will be brilliant ideas for those clients who desire not only to develop the quality of their products, but also for those who care about the environment and are ready to do real actions for the sake of nature conservation. Other features of each neobanks provider are shown in the table above and described previously in the text.

After conducting this comparative analysis, we could confidently state that such companies as Radar Payments, Opherium and Meniga are leaders in the banking and financial services platform market due to the breadth of the range of services offered, the best prices and unrivalled services that they offer.

## CONCLUSIONS

To summarize, today we can safely talk about the further implementation of fintech solutions in the ecosystems of traditional banks to retain customers and modernize existing platforms. Thanks to white-label companies qualitatively improve the customer experience and their services, new unique solutions appear on the market and cross-industry interaction develops. Startups, getting access to a reliable infrastructure, are able to develop their products. Thereby inciting competition in the market. There are more and more neobanks and niche players that are focused on solving specific customer needs and create services for niche audiences. The future lies in such banking, which finds and fills a need as best as possible, rather than focusing on everything at once.

White-label solutions not only help business but contribute to the development of the economy in general. Conceptually, BaaS and its white-label example are a step towards a society of open finance and a more flexible economy. Many countries are opting for open banking, namely allowing banks to access their infrastructure through open APIs. Thus, the development of BaaS and WL-solutions in banking will only gain momentum.

## SUMMARY

**Гриценко А.К., Яценко В.В. Програмне забезпечення для neobanking: сучасні рішення white-label у фінтех-індустрії.**

У динамічному, неперобачуваному і мінливому сучасному світі всі сфери життя зазнають змін. Не залишилася осторонь і банківська система. Впровадження інноваційних фінтех-рішень було єдиним способом утриматися на плаву для традиційних банківських установ. Тому з'явилися нові типи банківських установ – необанки. Термін «необанк», який виник у 2017 році, стосується нового типу фінансової установи, яка надає сучасні, швидкі та гнучкі послуги прямо у смартфоні чи месенджері. Фінансові послуги white-label дозволяють фінтех-компаніям і третім сторонам демонструвати вже готовий інтерфейс під брендом своєї компанії, використовуючи діючу банківську ліцензію, відповідність нормативним вимогам і серверну технологію, щоб запропонувати основні банківські функції, які конкурують з великими установами.

У статті проаналізовано переваги та подальші перспективи розвитку необанків, різниця між рішеннями white-label і baas, а також принцип роботи кожної із систем. Проведено аналіз сучасного ринку розробників платформ для необанків, що дозволило виявити найбільших гравців ринку з країн Європи та Скандинавії. У результаті дослідження визначено особливості кожного з розробників платформ для необанків та їх внесок у розвиток світової економіки. Крім того, у статті висвітлюються фактори, які роблять рішення white-label майбутнім онлайн-банкінгу.

В роботі задуються важливі умови для розвитку white-label рішень для необанків, традиційних і нетрадиційних банків – удосконалення нормативної бази, яка б визначала правовий статус таких установ, а також умови ліцензування та регулювання їх діяльності. Також у статті описані найпопулярніші розробники необанків. Проведений порівняльний аналіз дав можливість виділити фактори, що забезпечують успіх цих компаній, а також назвати компанії, які наразі є лідерами ринку.

Загалом дослідження дозволило виявити переваги, недоліки та ризики необанків, визначити чинники, що забезпечують стабільне зростання необанків white-label, а також перспективи їх розвитку.

**Ключові слова:** необанкінг, програмне забезпечення для необанків, white-label сервіси, банківська модель, програмне забезпечення.

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