

UDC 33**Innovative approaches to developing a digital banking platform: a case study of an online bank for SMBs (small and medium-sized businesses)****Dmitrii E. Volik**

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Abstract

Small and medium-sized businesses (SMEs) make up a significant part of the economy of most countries, often referred to as its "backbone". These companies play a critical role by providing jobs, stimulating innovation, and supporting economic growth. However, in order to do business effectively, SMEs need a wide range of banking services that can support them in various aspects of their operational activities. These needs range from transactional payment solutions to affordable credit products and strategic advice. One of the fundamental needs of the SME is convenient and affordable access to transactional and settlement banking services. Companies regularly make payments to suppliers, receive transfers from customers, and manage employee salaries. Therefore, the speed and flexibility of these processes are extremely important for them. Transactions should be carried out quickly and with minimal costs, as well as with the ability to easily track and manage all your financial assets through intuitive digital interfaces. SMEs require loans not only to cover current costs, but also to finance growth and expansion. For small and medium-sized businesses, access to capital often becomes a stumbling block.

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Keywords

Digital interfaces, costs, wages, credit products, financial assets.

Introduction

Traditional banks often impose rather high requirements on borrowers, making loans inaccessible for newly established companies or those whose financial profile does not meet the standards of large corporations. Flexibility and customization of loan products could significantly improve SME access to the necessary financial resources, and this is reflected in the growing popularity of fintech startups that actively implement such models.

Customization and personalization of banking services also play a significant role. Every company is unique, and its financial needs may differ even from competitors in the same industry. Therefore, standard banking products do not always meet the needs of SMEs well. Customized solutions, such as specialized accounts or credit lines, provide more opportunities to adapt to the specific requirements of the business.

Main part

Modern technologies offer great opportunities to improve the service of SMEs. The integration of banks with enterprise resource planning (ERP) systems, financial management tools, and accounting software allows for a significant simplification of the financial management process. Such integrations can automate many routine tasks like accounting, reporting, and forecasting, enabling entrepreneurs to focus on business development rather than managing financial flows (Table 1).

Table 1 - Key Functional Capabilities of the Platform

Functionality	Description	Advantages for SMB
Account Management	Ability to open, close, and manage various accounts through the platform	Convenience and control
Online Payments	Payments within the country and abroad	Speed and cost reduction
Integration with Accounting	Synchronization with popular accounting software	Simplification of accounting and reporting
Financial Planning and Analytics	Forecasts, budgets, and real-time financial reports	Informed decision-making
Mobile Application	Full functionality on mobile devices	Availability anytime and anywhere

An important need for SMBs is to ensure data protection and transaction security. Small and medium-sized businesses often become targets for cyberattacks because their security systems may be less complex compared to large corporations. Reliable systems of authentication, data encryption, and regular security audits are necessary to protect financial assets and minimize the risk of fraud and losses.

Among the current banking solutions for SMBs, traditional banking products and services, such as checking and current accounts, lines of credit, commercial financing, and cash management, can be highlighted. Although these solutions have existed for decades, they often have several drawbacks that can significantly limit their usefulness for SMBs.

The first drawback is excessive bureaucracy and complicated processes for opening accounts and obtaining loans. Bankers require a large number of documents and information, complicating and slowing down the process, creating additional barriers for entrepreneurs. Young companies lacking a credit history or significant assets often face refusals or unsatisfactory conditions.

Similarly, problems arise when trying to obtain loans. Traditional credit products are not always adapted for such companies. For example, interest rates may be too high, and application processing times may be too long. Small businesses often need urgent financing and cannot wait several weeks for

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loan approval.

The insufficient digitization of traditional banking services also presents a significant problem. In the modern world, where most processes can be automated and accelerated with technology, many banks still provide services that require personal visits to branches or extensive paperwork. This is not only inconvenient but also slows down the operational processes of companies.

The next problem is the lack of flexibility in the offers and conditions of banking products. Banks often offer standardized products that do not consider the specific needs of each business. As a result, companies are forced to adapt to the bank's conditions, which is not always useful or profitable.

Table 2 - Technological Innovations

Innovation	Description	Application in the platform
Artificial Intelligence (AI)	Data analysis, personalization of recommendations	Personalized offers and analysis
Blockchain	Increasing transparency and security of transactions	Reliable and secure payments
Open API	Ability to integrate with external services and applications	Functional extension
Cloud Computing	Data storage and processing in the cloud	Scalability and cost reduction
Biometric Authentication	Using fingerprints or facial recognition for system login	Enhanced security

Insufficient customer support can also be a significant barrier to effectively using SME banking services. When entrepreneurs encounter issues or questions, they often struggle to receive qualified assistance or answers promptly. The reason for this lies in the fact that banks do not always have enough specialized managers capable of working with small businesses and providing the necessary consultations.

Many banks do not offer comprehensive financial solutions. As a result, companies are forced to turn to multiple service providers to meet their diverse financial needs. This forces entrepreneurs to spend more time and resources managing their financial affairs, significantly reducing overall business efficiency.

Against the backdrop of these shortcomings, the fintech industry is developing, offering more modern, flexible, and accessible solutions for SMEs. Fintech companies provide simple and easy-to-use platforms that integrate with other company systems, offer fast and easy access to finances, and personalized solutions. They focus on the client and their needs, allowing small and medium-sized businesses to manage their finances more effectively.

Thus, improving banking services for SMEs requires a comprehensive reevaluation of approaches to serving these clients. It is important to consider the specifics and unique needs of small and medium-sized companies, offering flexible and personalized solutions. The integration of new technologies and the improvement of customer support should also become priority tasks for banking institutions if they want to remain competitive and retain the loyalty of their SME clients.

In recent years, digital banks have become increasingly popular among representatives of small and medium-sized businesses (SMEs). These banks offer many advantages, including lower fees, simplified account opening procedures, and a wide range of digital services that traditional banks may not always be able to offer. Let's take a brief overview of the leading digital banks for SMEs and highlight their strengths and weaknesses.

One of the leading digital banks for SMEs is Revolut Business. This bank offers its clients a wide range of services, including multi-currency accounts, international transfers, and the ability to accept online payments. The strong point of Revolut Business is its user-friendly and intuitive interface, which

allows users to manage their finances quickly and easily. Additionally, the bank offers competitive transaction and transfer fees, which is a big plus for small businesses looking to optimize their expenses. However, one of the drawbacks of Revolut Business is its limited physical banking and insufficient customer support, which could be a problem for businesses that require more personalized service (Table 3).

Table 3 - Customer Orientation and Support

Client-Focused Aspect	Description	Advantages for SMBs
24/7 Support	24/7 support via chat, phone, and email	Quick problem resolution
Personal Managers	Assignment of a dedicated manager for each client	Personalized attention and support
Training Resources	Webinars, video tutorials, and articles for client training	Improvement of financial literacy
Onboarding Platform	Step-by-step guide on getting started with the platform	Ease of getting started

Another popular solution is N26 Business, which offers free business accounts with a variety of useful features. These include instant transfer capabilities, integration with many accounting and payment systems, as well as convenient tools for expense management. The advantages of N26 Business are its transparent rates and the absence of hidden fees, allowing SMEs to more accurately plan their financial operations. However, like with Revolut, N26 Business may lack personalized customer support and may have some service availability limitations in different countries.

Wise (formerly known as TransferWise) also presents an interesting solution for SMEs. The bank specializes in international payments, offering low fees and favorable exchange rates. Wise Business is ideal for companies that frequently conduct international transactions or work with foreign partners. A key advantage of Wise is its transparency in fees and exchange rates, allowing businesses to avoid unexpected costs. At the same time, Wise may not provide such comprehensive banking services as some other digital banks, focusing only on payments and transfers.

Monzo Business offers a comprehensive approach to digital banking services. It supports multi-currency accounts, offers tools for automating accounting, and integrates with various financial services. The strengths of Monzo Business are its flexibility and adaptability to business needs, as well as the high ease of use of the mobile app. However, the bank may be limited in international transactions and currency support, which can be problematic for companies actively operating in the global market.

Starling Bank offers full-fledged business accounts that include tools for cash flow management, tax reporting, and accounting. A strong aspect of Starling Bank is its extensive integration with various financial platforms and a high level of security. Additionally, the bank provides 24/7 customer support, which is a big plus for businesses. However, despite all these advantages, Starling Bank, like other digital banks, may face challenges related to regulation and sufficient support for physical offices.

Tinkoff Business is a leading player in the Russian digital banking market for SMEs. It offers its clients a wide range of banking services, from account opening to lending and acquiring. The strengths of Tinkoff Business are its well-developed ecosystem of services and applications, as well as a high level of convenience for the client. At the same time, the bank may face challenges in the area of international expansion and potential currency restrictions.

While each of the above digital banks can offer numerous benefits for SMEs, it is also important to consider their limitations and weaknesses. For example, many digital banks may not provide the level of personalized support that a traditional bank can offer. This can be a significant drawback for companies that need more specialized solutions or have complex financial needs.

Traditional banks also have the advantage of physical offices, where clients can receive help face-to-face. Although this is becoming less relevant in the digital age, for some businesses, this service model remains important. Additionally, issues related to regulation and data security remain relevant for digital banks. Despite the presence of modern protection technologies, data security and privacy concerns are becoming increasingly pressing, especially in light of the growing number of cyberattacks.

It is important to note that digital banks continue to actively develop and adapt to market needs. They are constantly introducing new features, expanding the range of services provided, and working on improving the user experience. For example, many digital banks have started offering integrations with popular accounting systems, allowing businesses to automate routine operations and save time. They are also actively working on improving their customer support services, offering round-the-clock consultations via chat and hotlines.

One of the key strengths of digital banks is their ability to quickly adapt to market changes and implement new technologies. This allows them to offer their clients the most modern financial solutions, making them attractive to innovation-minded companies. However, this same pace of development can lead to risks of shortcomings and errors, requiring a high degree of attentiveness from users (Table 4).

Table 4 - Marketing Strategies and Promotion

Strategy	Description	Expected Result
Target Marketing	Focus on advertising campaigns aimed at SMEs through social networks and email	Increase in customer acquisition
Partnerships and Collaborations	Collaboration with business associations and chambers of commerce	Expansion of the customer base
Loyalty Programs	Offering bonuses and discounts to regular customers	Increase in customer retention
Case Studies and Reviews Posting	Publishing successful client cases on the website and social networks	Enhancement of trust and attraction of new customers

In order to make an informed choice among available digital banks, SMEs should carefully analyze their needs and seek solutions that best align with their specifics. Given the variety of offerings in the market, businesses are advised to pay attention not only to the cost of services but also to the availability of necessary features, the quality of customer support, and the reliability and security of the bank.

Thus, digital banks offer many advantages for SMEs, including low fees, convenient digital services, and the ability to integrate with various platforms. Revolut Business, N26 Business, Wise, Monzo Business, Starling Bank, and Tinkoff Business stand out as some of the leading players in the market. However, like any other financial institutions, they have their strengths and weaknesses, which should be considered when choosing a bank for your business.

In the era of digital transformation and widespread information technology, cybersecurity becomes one of the key tasks for any organization. This is because data, being a valuable asset, must be protected from cyberattacks, leaks, and unauthorized access. This is especially important for companies working in finance, healthcare, and government sectors, where data confidentiality and integrity are critical.

Cybersecurity measures begin with creating a comprehensive information protection strategy. This strategy includes conducting regular security audits, assessing risks and vulnerabilities, and implementing modern solutions to protect against cyberattacks. A multi-layered protection system, including firewalls, antivirus software, intrusion prevention systems (IPS), and other tools, provides reliable protection against various types of threats.

A mandatory element of ensuring cybersecurity is comprehensive access management using multi-factor authentication (MFA). This will minimize the risk of unauthorized access to critical systems and

data. In addition, regular training of employees in cybersecurity basics and safe use of information systems plays a key role in reducing risks. This is because the human factor is often the weak link in the information security chain.

Failure to comply with cybersecurity can lead to serious consequences for both companies and their clients. Data breaches, hacks, and cyberattacks can not only cause financial losses but also harm the reputation and trust of consumers. Therefore, all measures aimed at protecting data and information systems must be strictly regulated and regular. An important aspect of cybersecurity is the physical security of servers and other equipment. Access to them should be strictly controlled and limited. Installed monitoring and access control systems must operate without interruptions, which minimizes the likelihood of unauthorized access. In case of emergency situations, measures should be provided for the rapid restoration of system operability. Compliance with regulatory requirements and standards in the field of cybersecurity is also a critical factor. Different industries and regions have their own specific requirements and standards that organizations must meet. For example, companies operating in Europe are required to comply with the General Data Protection Regulation (GDPR), which mandates strict measures to protect users' personal data. Non-compliance with these requirements can lead to significant fines and legal consequences.

For effective compliance with regulatory requirements and standards, the implementation and support of information management systems (ISMS) based on standards such as ISO/IEC 27001 is necessary. These systems help document, implement, and manage information security practices, providing a structured approach to data and process protection. Regular internal and external audits also contribute to maintaining a high level of security and compliance with established requirements.

Implementing a privacy and data protection policy is an integral part of meeting regulatory requirements. The policy should include rules for the collection, storage, processing, and transmission of data, as well as measures for their protection. It is important to inform users about how their data is used and protected, thereby building trust in the company. Having an incident response plan is also an important element of ensuring security and compliance with regulatory requirements. This plan should include procedures for the rapid detection, assessment, and response to cyber incidents, as well as measures to minimize their consequences. An essential part of the plan is the creation of rapid response teams and the regular conduct of cybersecurity drills and exercises. Another important aspect of compliance with regulatory requirements is the protection of intellectual property rights. Companies should take measures to protect their technologies, products, and data from unauthorized use and theft. This requires registering patents, protecting copyrights, and using other legal tools.

In conditions of rapidly changing cyber threats and stringent regulatory requirements, organizations must continuously improve their security measures. It is important to monitor the latest threats and vulnerabilities, update software, and regularly test systems for resilience against attacks. All of this requires a comprehensive approach and constant attention from company management.

Investments in cybersecurity and compliance with regulatory requirements pay off not only by preventing potential financial losses but also by improving the company's reputation and trust from customers and partners. In a competitive environment, companies that demonstrate a high level of data protection and adherence to standards gain additional advantages in the market.

The importance of cyber risk management cannot be overstated, and it must become an integral part of the overall company risk management strategy. This includes identifying and assessing risks associated with potential cyberattacks and developing plans to mitigate them. It is important to integrate cybersecurity into the overall risk management process, creating a unified approach to ensuring the security and resilience of the business.

The technologies used to ensure cybersecurity must be constantly updated and improved to meet new challenges. This requires the implementation of innovative solutions such as artificial intelligence and machine learning to automate the processes of detecting and responding to cyberattacks. Such technologies enable faster identification of threats and prompt action to neutralize them.

Organizations should also pay attention to data privacy management in the context of cloud technologies. With the increasing use of cloud services and data storage in the cloud, it is important to ensure their protection considering the specifics of cloud environments. This includes data encryption, access management, and monitoring the activities of cloud service providers.

Conclusion

In conclusion, ensuring cybersecurity and compliance with regulatory requirements are crucial elements for the sustainable and secure operation of any organization. This requires not only the implementation of modern technological solutions but also the continuous development of a security culture, employee awareness, and strict adherence to regulations and standards. In the global information economy, where data becomes a new type of currency, a company's ability to effectively protect its assets and comply with regulatory requirements becomes a critical factor in its success and competitiveness.

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Инновационные подходы к разработке цифровой банковской платформы: кейс интернет-банка для СМБ (средний малый бизнес)

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Аннотация

Малый и средний бизнес (СМБ) составляет значительную часть экономики большинства стран, часто называясь ее «спинным хребтом». Эти компании играют критическую роль, обеспечивая рабочие места, стимулируя инновации и поддерживая экономический рост. Однако для эффективного ведения бизнеса СМБ нуждаются в широком спектре банковских услуг, которые могут поддерживать их в различных аспектах операционной деятельности. Эти потребности варьируются от транзакционно-платежных решений до доступных кредитных продуктов и стратегических консультаций. Одной из основополагающих потребностей СМБ является удобный доступ к транзакционным и расчетным банковским услугам. Компании регулярно осуществляют платежи поставщикам, получают переводы от клиентов и управляют заработной платой сотрудников. Поэтому для них крайне важны оперативность и гибкость этих процессов. Операции должны осуществляться быстро и с минимальными издержками, а также с возможностью легко отслеживать и управлять всеми своими финансовыми активами через интуитивно понятные цифровые интерфейсы. СМБ требуют кредитов не только для покрытия текущих издержек, но и для финансирования роста и расширения. Для малого и среднего бизнеса доступ к капиталу часто становится камнем преткновения.

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Ключевые слова

Цифровые интерфейсы, издержки, заработная плата, кредитные продукты, финансовые активы.

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