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The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

В сборник вошли доклады студентов, магистрантов, докторантов и молодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

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Необанк дәстүрлі банктерге қарағанда комиссиялық төлемдерді төмен деңгейде алады, жаңа технологияларды қолданады, клиенттерге үздіксіз тәулік бойы қызмет көрсете алады. Бұл жаңа өнімнің қызметтер базасын кеңейту, оның құнын төмендету секілді мүмкіндіктері бар. Алайда кибершабуылдарға тап болу, кейбір елдерде необанк қызметін реттейтін заңнаманың болмауы және технологияларға тәуелділік секілді кемшіліктері де бар.

Ұзақ мерзімді перспективада необанктердің кірістерінің «алымдар үлгісі» жұмыс істемеуі мүмкін. Біріншіден, реттеуші органдардың қысымымен банкаралық комиссияның мөлшері азайып келеді және одан әрі төмендей береді – осыған ұқсас процестер АҚШ, ЕО, Канада және басқа да аймақтарда орын алуда. Екіншіден, жеке банктік лицензиясы жоқ необанктер көп жағдайда мәміленің 1,8-2,0 пайызынан аспайтын банкаралық комиссияны лицензиясын пайдаланатын банкпен бөлісуге мәжбүр. Үшіншіден, абсолютті мәнде тек комиссиялық кіріс бизнесті өркендету және шығынсыздыққа жету үшін жеткіліксіз болуы мүмкін (мысалы, Бразилияның Nubank 1 миллион ашық шотқа жеткеніне қарамастан, 2016 жылы 36 миллион АҚШ доллары көлемінде шығын көрсетті).

Қорытындылай келе, необанктердің артықшылықтары – жылдамдылық, клиенттен алынатын комиссиялық төлемдердің төмен деңгейі, инновация, қолданудың қарапайымдылығы және қолжетімділігі болып табылады. Сонымен қатар жалақы, кеңсені жалдау секілді шығындары болмағандықтан, жеке және заңды тұлғаларға депозитті жоғары пайыз мөлшерлемесімен ашу, ал несиені төменгі пайыз мөлшерлемесімен беру мүмкіндігіне ие. Келешекте необанктер дәстүрлі банктерге қол жеткізе алмайтын адамдарға, мысалы, табысы төмен немесе ауылдық жерлерде тұратын адамдарға қаржылық қызмет көрсете алады. Необанктер өз тұтынушылары туралы деректерді оларға жекелендірілген өнімдер мен қызметтерді ұсыну үшін пайдалана алады.

Қолданылған әдебиеттер тізімі

1. Сенная И.К. НЕОБАНК – БАНК БУДУЩЕГО // Научное сообщество студентов: МЕЖДИСЦИПЛИНАРНЫЕ ИССЛЕДОВАНИЯ: сб. ст. По мат.
2. Корсунова Н.Н. Необанк как банк будущего в обслуживании корпоративных клиентов в условиях перехода к цифровой экономике // Текст научной статьи по специальности «Экономика и бизнес» / Вестник академии знаний. 2020
3. Комаров А.В., Мартюкова В.М. Небанкинг как направление развития современных финансовых технологий // Вестник университета. 2020. DOI: 10.26425/1816-4277-20-3-134-142
4. Калиева Г.Т., Нурымбетова Б.И. Цифровизация банковского дела в Республике Казахстан // Сборник международной онлайн-конференции на тему «Государственная независимость Республики Казахстан: истоки, современное состояние, вызовы», посвященной 30-летию государственной независимости Республики Казахстан. Алматы, 2021. ISBN 978-601-7646-18-9
5. Altyn-I ресми парақшасы [электрондық ресурс] <https://altynbank.kz/personal/altyn-i>
6. Небанкинг и цифровые карты: как развивается FinTech в Казахстане [электрондық ресурс] <https://trends.rbc.ru/trends/amp/news/640ed0e89a79477c2e6071ef>

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LEVERAGING DIGITAL TOOLS IN THE BATTLE AGAINST FINANCIAL FRAUD IN KAZAKHSTAN

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Kazakhstan has experienced a notable increase in the number of financial transactions carried

out via digital channels in the past few years, as a result of a major digital transition. But this quick digitization has also made the country more vulnerable to financial fraud, therefore a strong response is required. Financial fraud in Kazakhstan may be addressed through the use of cutting-edge digital solutions. This essay examines the various ways in which digital tools strengthen the nation's defenses against financial sector fraud.

In order to understand the obstacles that financial fraud presents in Kazakhstan, it is imperative to sketch the changing terrain of fraudulent activity in the country. Although conventional fraud methods continue to exist, cybercriminals have skillfully modified their approaches to take advantage of weaknesses in digital systems. Identity theft, credit card fraud, and money laundering are on the rise and represent serious risks to financial institutions, companies, and people in general. In addition, the widespread use of digital transactions has made it easier for cybercriminals to carry out intricate fraud schemes, therefore preemptive steps are needed to protect the integrity of Kazakhstan's financial environment.

Table 1 - Cases of fraud in Kazakhstan in 2023

Types of financial fraud	Cases (in numbers)
Internet fraud	19,900
Payment cards	267
Lending	53
Borrowing	41

Warning - [1] compiled based on data source

According to this table, we can see that financial fraud in Kazakhstan is still a big problem. Looking at the numbers, almost 97 billion tenge was lost by Kazakhs, and there were registered 40.8 thousand criminal offenses under the article “Fraud” - 1.6% more than a year earlier. As we can see from this table and the numbers, financial fraud is the big enemy that needs to be solved and reduced.

Kazakhstan's authorities, financial institutions, and cybersecurity corporations have recognized the growing threat of financial crime and have embraced digital solutions as essential tools in their armory to combat fraudulent operations. These digital tools comprise a wide range of technology and approaches intended to identify, stop, and lessen fraudulent activity in the digital sphere.

Table 2 - Comparison of Digital Tools for Combating Financial Fraud in Kazakhstan

Digital Tool	Description	Advantages	Challenges
Advanced Data Analytics	Utilizes machine learning algorithms to analyze large datasets in real-time, identifying patterns indicative of fraud.	<ul style="list-style-type: none"> - Early detection of fraudulent activities - Proactive intervention to prevent losses 	<ul style="list-style-type: none"> - Data privacy concerns - Complexity of implementation and management
Biometric Authentication	Verifies the identity of individuals through unique biological traits such as fingerprints or facial features.	<ul style="list-style-type: none"> - Enhanced security against identity theft and unauthorized access - User-friendly and convenient 	<ul style="list-style-type: none"> - Integration with existing systems - Potential for false positives or negatives

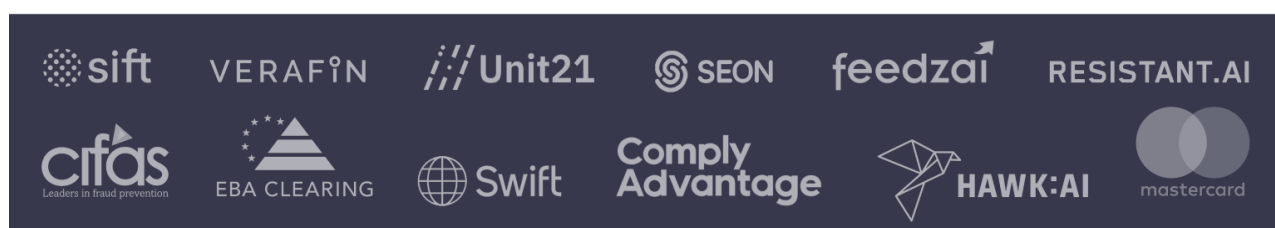
Blockchain Technology	Provides a decentralized, tamper-proof ledger of transactions, enhancing transparency and security.	<ul style="list-style-type: none"> - Immutable record of transactions - Reduced risk of data tampering and manipulation 	<ul style="list-style-type: none"> - Scalability limitations - Energy consumption in proof-of-work consensus mechanisms
Fraud Detection Software	Employs rules-based engines and predictive analytics to identify suspicious activities in real-time.	<ul style="list-style-type: none"> - Automated detection of fraudulent patterns - Customizable rules and thresholds 	<ul style="list-style-type: none"> - False positives leading to increased workload for fraud investigators - Cost of implementation and maintenance

Warning - [2] compiled based on data source

This table provides a concise comparison of various digital tools utilized in the fight against financial fraud in Kazakhstan, highlighting their respective advantages and challenges. One of the foremost digital tools deployed in the fight against financial fraud is advanced data analytics coupled with machine learning algorithms. By analyzing vast datasets in real-time, these technologies can identify anomalous patterns indicative of fraudulent behavior. Financial institutions leverage predictive analytics models to anticipate potential fraud scenarios, allowing for proactive intervention before substantial losses occur. Foremost among these digital tools is the integration of advanced data analytics and machine learning algorithms into fraud detection systems. By scrutinizing vast datasets in real-time, these technologies can discern anomalous patterns indicative of fraudulent behavior, enabling early intervention to thwart fraudulent transactions. Predictive analytics models further augment the capabilities of financial institutions by anticipating potential fraud scenarios and facilitating proactive measures to mitigate risks.

Furthermore, biometric authentication has emerged as a robust solution to verify the identities of individuals engaging in financial transactions. Leveraging biometric identifiers such as facial recognition and fingerprint scanning, banks and fintech companies in Kazakhstan bolster the security of their online banking and payment systems, mitigating the risk of unauthorized access and identity theft. Blockchain technology, renowned for its transparency and immutability, has garnered significant attention as a potent tool in the fight against financial fraud. By leveraging blockchain-based solutions, financial institutions can establish tamper-proof ledgers of transactions, thereby mitigating the risk of fraudulent activities such as double-spending and data tampering. Moreover, blockchain enhances transparency and accountability within the financial ecosystem, fostering trust among stakeholders and deterring fraudulent behaviors.

In addition to blockchain technology, sophisticated fraud detection software equipped with rules-based engines and predictive analytics capabilities have revolutionized the detection and prevention of financial fraud. These software solutions analyze transactional data in real-time, leveraging machine learning algorithms to identify suspicious activities and flag potentially fraudulent transactions for further investigation.



Picture 1. List of fraud detection software solutions
Warning - [3] compiled by the author according to the source

Also, we can consider the best fraud detection software solutions, which includes 13 solutions. These solutions are not widely used in Kazakhstan, but we can implement them based on the experience of the UK. These solutions include fraud detection softwares, like: Mastercard Consumer Fraud Risk, Swift GPI, SEON, and etc.

In tandem with the adoption of digital tools, the formulation of robust regulatory frameworks is imperative to fortify Kazakhstan's financial ecosystem against fraud. Regulatory bodies must enact stringent laws and regulations governing digital financial transactions, data privacy, and cybersecurity practices to deter fraudulent activities effectively.

Moreover, regulatory oversight plays a crucial role in ensuring compliance with established standards and fostering a culture of accountability among financial institutions and businesses. Furthermore, collaboration between public and private stakeholders is paramount in combating financial fraud effectively. Public-private partnerships facilitate information sharing, intelligence gathering, and coordinated responses to emerging threats, thereby strengthening the collective defense against cybercriminals. By fostering collaborative initiatives, Kazakhstan can leverage the collective expertise and resources of various stakeholders to confront the evolving challenges posed by financial fraud.

Despite the promising advancements in digital tools for combating financial fraud, challenges persist on multiple fronts. The rapid pace of technological innovation presents a double-edged sword, as cybercriminals continuously devise new tactics to evade detection and circumvent security measures. Moreover, the shortage of skilled cybersecurity professionals poses a significant hurdle in implementing and managing advanced digital tools effectively.

Addressing these challenges requires concerted efforts from both public and private sectors. Initiatives aimed at bridging the skills gap through education, training, and workforce development are essential to ensure the efficacy of anti-fraud efforts. Additionally, ongoing research and development in cybersecurity technologies are paramount to stay ahead of evolving threats and maintain the resilience of Kazakhstan's financial ecosystem.

Looking ahead, the future prospects of leveraging digital tools in the fight against financial fraud in Kazakhstan appear promising. As technology continues to evolve, so too will the arsenal of tools and techniques available to thwart fraudulent activities. Embracing a proactive, multi-layered approach that integrates cutting-edge technologies, robust regulatory frameworks, and collaborative partnerships will be pivotal in safeguarding Kazakhstan's financial ecosystem against fraud in the digital age.

In conclusion, the proliferation of digital transactions in Kazakhstan's financial landscape has heightened the urgency of combating financial fraud. Leveraging advanced digital tools, including data analytics, biometric authentication, blockchain technology, and fraud detection software, holds immense potential in fortifying the country's defenses against fraudulent activities. However, addressing the challenges posed by financial fraud requires a holistic approach encompassing regulatory reforms, collaborative initiatives, and ongoing investments in cybersecurity capabilities. By embracing innovation and collaboration, Kazakhstan can navigate the evolving landscape of financial fraud with resilience and confidence, safeguarding the integrity of its financial system for years to come.

Reference list

1. Pochti 97 mlrd tenge poteryali kazahstantsi iz za deystviy moshennikov v 2023 godu. <https://www.inform.kz/ru/pochti-97-mlrd-tenge-poteryali-kazahstantsi-iz-za-deystviy-moshennikov-v-2023-godu-668001>
2. Unveiling the Best Financial Fraud Detection Software. <https://www.vintti.com/blog/unveiling-the-best-financial-fraud-detection-software-a-comprehensive-review/>
3. 13 Best Fraud Detection Software Solutions in 2023. <https://salv.com/blog/fraud-detection-software-solutions/>