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Research Article

Digitization Of Credit Management

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ABSTRACT

The management of credit granted to customers is credit management and is identified as strategic by companies. Credit management is usually developed in large scale business organizations all over the world, but it is not the case in small and medium scale companies where the focus of business is mainly on sales and they usually avoid such critical management. Digitization of credit management includes involving digital technologies for automation of the process that would improve data analysis as well as enhance the level of customer experience. It would lead to fast decision-making, reduction in costs, and efficient workflows. Such digital transformation of banks and financial institutions has made a huge influence on tradition credit system. It is shown by mechanism analysis that digital transformation can make positive influence on credit scale as it would improve operating efficacy as well as strengthen risk control capability. As finance and Information Technology experience digital transformation giving an opportunity of re-evaluating and optimizing the process of credit management. Study survey was conducted among 231 people from different sectors to study the Digitization of Credit management.

Keywords: Digital transformation, Credit management, Data quality, artificial intelligence, machine learning, Risk Assessment

Introduction

The digital transformation of banks and financial institutions with the goals of achieving deep integration of technological tools and building a modern and advanced financial system, has become a certain choice in present era. With the introduction of digital technology, banking system can achieve the automation of process, big data analytics and application of artificial intelligence, thus promotes credit expansion, stimulates invention in credit products. Vigorous development of digital financial has been promoted by digital transformation of the system, it has also expanded the coverage of financial services and have increased the corporate credit availability. The traditional system if risk control of banks and financial institutes has less efficacy in data entry, risk control capability, and poor update on software application. New vitality in the upgradation of risk control system has been injected by digital transformation. Digital transformation of banking system on one hand, has overcome the deficiencies of traditional system of risk control by collecting effective information more accurately (Yu, 2025). The management of cash flow is one of the vital factors for success of any company. It has become the main focus of companies. Credit is extended to customers by almost every big company as it an essential tool to attract customers. If credit is managed poorly it would result in risk of converting credit sale into cash. With the advancement of technology, it has become important to reconsider the develop a better way of cash flow management. It has become essential to automate the process like calculation of credit score, terms of payment for proper business operation, credit trustworthiness of customers (Srinivas & Kayalvizhi, 2022). Many critical challenges can be dealt with by using artificial driven solutions that are being faced by teams of credit management like fragmentation of data, manual intervention, and delayed decision-making. By integrating financial, sales, and external data sets, companies can make achievement of a comprehensive and real-time view of assessment of credit risk for business-to-business customers. Moreover, by fine tuning the process of credit risk and integration of AI driven solutions into the process of credit management, business firms can achieve fast and accurate credit risk assessment, and experience risk mitigation in the sales cycle. Automation of the process of credit risk assessment can improve decision-making and assists companies in management of credit more efficiently that would eventually improve financial

performance and efficacy of business operations (Dmello, 2022). A significant impact is made by digitalization on credit of banks and risks of insolvency but it does not make any influence on risk of liquidity. The insolvency risk is also mitigated by lowering the costs and increasing the profitability. However, digitalization does not make any substantial influence on the risk of liquidity as digital channels are leveraged by banks for activities of lending and deposits. One of the important consideration of banks is credit risk as it shows the risk of default on loans. However, there are many ways in which banks ban be digitalized that would help in risk mitigation. Adoption of digital financial product and services need banks to keep themselves updated with latest technology and information as it would improve their risk management efficacy as well as internal governance eventually helping them in reduction in credit risk. Credit risk is mainly measured by non-performing loan ration as it would show the safety of credit assets of banks (Hoque, Le & Le, 2024). It is observed that digital credit is more developed in countries with strict rules and regulations on anti-money laundering and terrorists financing. It is suggested that capacity of innovation plays an important role in expansion of all forms of digital credit. Digital credit model is usually constructed in decentralized forms, as individual lenders and institutional investors select borrowers and projects directly as per their risk appetite to finance (Le, Ngo & Nguyen, 2023).

Literature Review

As advancement of technology is reshaping the financial landscape continuously, implementing innovative solutions in credit appraisal has become imperious for financial institutes that seeks efficacy, competitiveness and accuracy. Effective application of technology in credit appraisal needs strategic and holistic approach. Financial institutes make investment in data quality, advanced analytics, cybersecurity, transparency, regulatory compliance, financial inclusion, and collaboration of human machine positioning themselves in thriving a rapidly emerging financial landscape. With the implementation of such strategies, financial institutes can connect with full potential of technologies for enhancement of sturdiness of credit appraisal processes staying competitive in ever changing financial industry (Kataria & Singh, 2024). Practices of credit management assists in understanding the borrower. One of the common approaches to evaluate them is by 5 Cs of credit for obtaining a profile on their financial risk. Such evaluation runs on the belief that past payment can be an important indicator of future action of borrower. It is also found that self-regulation also impacts the decision of lending by digital financial institute. After taking everything into account, this evaluation will focus on practices of digital credit management on credit scoring, review system of loan, financial literacy and regulations, protection of customer and limit system. The study concludes that the nature of customer make impact on the decision of lending of company. It also concludes that the fastest borrower is the customer who have the high credit rating and has never defaulted to pay any loan from digital company (Nthiga & Simiyu, 2021). Assessment of credit risk has become a major concern in modern finance with regards to informed decision of lending. The two most innovative approach to credit risk modelling are Artificial Intelligence (AI) and Machine Learning (ML). It is revealed that it is high time financial institutes for adopting advanced and AI driven system, or else they would likely to be excluded from contemporary finance. However, the challenge of transparency of model and its fairness, together with guarantee of configuration with regulatory demands needs to be addressed so that artificial intelligence can arrange their duties in a more responsible manner in assessment of credit risk (Wang, 2024).

Management of credit risk is a foundation of banking sector, where accurate evaluation and proactive justification of credit risk are vital to maintain financial stability and regulatory compliance. Recently, this field has been revolutionized by AI and ML that provides advanced methods to evaluate, predict and manage credit risk efficiently and accurately. It is revealed that models that are driven by artificial intelligence that includes collaborative techniques like “Random Forest” and “Gradient Boosting” along with neural networks, outperforming traditional models like “Logistic Regression” and “Decision Trees” in terms of predictive accuracy, recall, precision, and overall sturdiness of model. It is affirmed by study that artificial intelligence and machine learning, when used mainly collaborative approach and neural network making substantial effect on the accuracy and reliability of framework of credit risk management. With the adoption of such advanced technological model, financial institutes can make decisions based on data-driven with great precision, eventually reduces the exposure of risk and enhanced financial stability (Yadav, 2020). A vital role is played by financial technology improves accessibility of loan and management of debt. The substantial influence of financial technology on accessibility of loan, proved by statistical outcomes that suggests that that small and medium enterprise are better positioned to secure financing through inventive digital platform in comparison to traditional methods of banking. Furthermore, the significant influence of financial technology on debt management shows that digital tools can be utilized by SMEs for management of debt obligation effectively, improves financial discipline and reduction of defaulting risks. These findings reveal the significance of integration of financial technology solutions into the business operations of SMEs for fostering financial inclusion as well as stability (Omeke, 2025). Using financial technology is beneficial for improving screening capabilities of bank’s information, processing capabilities of soft information, and capabilities of risk management, and lessens the problems that are being caused by asymmetry information between borrowers and banks. Particularly, the ratio of non-performing loan on asset side of loan is reduced substantially, to that banks tend to serve more “long-tailed customer” and boost their willingness to issue loans, increase the scale of business and proportion of credit and personal loans, long and medium-term loans, and promoting the

adjustment and optimization in structure of credit, customer and structure of term. With the constant development of financial technology in banking and financial sector, the level on influence of improvement in the level of financial technology on structure of credit in distinct years has apparent dissimilarities, and related with first years of financial technology the level of impact has increased every year, that is, with the expansion of development of financial technology, every unit of improvement in the level of financial technology would cause distinct changes in credit structure of banks (Sun, 2023). The digitalization of credit risk through technology of machine learning has become attractive these days. Financial and credit institutes are not able to manage inventive technologies and digital tools in the era of digital transformation and continuously transforming environment of market. Using algorithms of machine learning for accurate measurement of credit risk by referencing large amount of available data. However, using techniques of machine learning have increased loss-modeling risk as models are faulty or misrepresented or may be due to underlying assumptions are not correct or obsolete. Issues have become severe with corporate portfolios, looking at the significant portion of low default segments for which there is insufficiency of statistical data for permitting assimilation and analysis based on algorithm. Additionally, regulators need that the outcome of modelling of risk-assessment in corporate loans must be transparent, something which is not always feasible where machine learning algorithms are utilised (Nehrebecka, 2021). One of the most vital inputs is rural credit for the farm production all over the globe. Even after so much of advancement of technology and digitalization in evolving and developing economies, still there is a large part of society who are untouched by banking transactions. Technology based on machine learning is giving a new hope. However, it is non-banking institutes as well as banking that decides how they would adopt this advanced technology for having fewer human biases in decision-making of loan. Speediness and accuracy in decision-making process of loan are two vital aspects for success of a banking institutes. In the past few years, a pivotal role is played by fintech startups in this direction and they are also assisting some of the traditional banking institutes for making decisions regarding loans faster with high level of accuracy. It is recommended methods that are hybrid or based on AI or ML for credit scoring, though the real challenge for financial institutes is implementing this at the ground level with proper blend of traditional as well as digital methods (Kumar, Sharma & Mahdavi, 2021). With the higher level of growth of global consumer credit in a rising but unstable economy, the requirement to have a better, individual and effective assessment of risk in lending biases have become evident. The portfolio of loans in a customer base is assessed by the system of traditional logistic early warning system. On the other hand, artificial intelligence offers lenders an opportunity of monitoring individual risk development constantly, on the basis of behavior structured as well as unstructured data. Operational risk costs will be reduced like collection and fights with frauds successfully by credit robots on high level (Thiel & Raaij, 2019). Expansion of technology innovation is any aspect like increasing the utilization of non-traditional data in practices of credit management, in a blend with advanced algorithms and sophisticated technology like AI and ML in financial sector, would possibly make significant influence in mandate of Federal Reserve ensuring banking system safer and soundness and overall creditworthiness (Shangyang, Hassan & Ali, 2023).

Objective

To study the Digitization of Credit management.

Methodology

Study survey was conducted among 231 people from different regions. “Random sampling method” along with “T-test” were used to collect and analyse the data.

Data Analysis

In the total population of study survey males are 51.52% and females are 48.48%. 3.74% of them are 30 to 35 years of age, 29.87% are between 35 to 40 years, and 39.39% are above 40 years. Looking at the sectors, 35.93% are from banking sector, 33.33% are from insurance sector, and 30.74% are from finance sector.

“Table 1 General Details”

“Variables”	**“Respondents”**	**“Percentage”**
Male	119	51.52
Female	112	48.48
Total	**231**	**100**
Age (years)		
30 to 35	71	30.74
35 to 40	69	29.87
Above 40	91	39.39
Total	**231**	**100**
Sectors		
Banking	83	35.93

Insurance	77	33.33
Finance	71	30.74
Total	**231**	**100**

Table 2 Digitization of Credit management

"S. No."	**"Statements"**	**"Mean Value"**	**"t value"**	**"Sig."**
1.	Using AI and ML algorithms for accessing creditworthiness based on traditional and alternative data	4.09	16.858	0.000
2.	Customers can apply for credit from any device, upload documents and track status of application	4.27	19.766	0.000
3.	Real-time approval of loans through AI automation, eventually reducing turnaround time	4.12	17.709	0.000
4.	Real-time dashboard for financial institutes for tracking portfolio health & exposure to risk	4.29	19.986	0.000
5.	Instant identity verification using biometrics and government database	3.16	2.520	0.006
6.	Early warning system detects signs of credit stress or defaults	4.17	18.114	0.000
7.	SMS, email and app notification for improved repayment discipline	3.17	2.657	0.004
8.	Use of digital wallets, QR codes, and UPI for efficient repayment	4.30	20.407	0.000
9.	Every transaction and decision are digitally logged for traceability	4.10	17.059	0.000
10.	Automates generation of compliance reports for central bureaus	4.21	19.094	0.000

Table 2 shows Digitization of Credit management where respondent says that Using AI and ML algorithms for accessing creditworthiness based on traditional and alternative data (4.09), Customers can apply for credit from any device, upload documents and track status of application (4.27), Real-time approval of loans through AI automation, eventually reducing turnaround time (4.12), Real-time dashboard for financial institutes for tracking portfolio health & exposure to risk (4.29), Instant identity verification using biometrics and government database (3.16), Early warning system detects signs of credit stress or defaults (4.17), SMS, email and app notification for improved repayment discipline (3.17), Use of digital wallets, QR codes, and UPI for efficient repayment (4.30), Every transaction and decision are digitally logged for traceability (4.10), and Automates generation of compliance reports for central bureaus (4.21). All statements pertaining to Digitization of Credit management are found to be significance, with p-values below 0.05 following the application of a t-test.

Conclusion

Credit management seeks to assemble inflow of money, it delays outpouring of money, and investing money for acquiring a return, getting money at the best accessible rate keeping up ideal money level. To ensure that business can assess the creditworthiness of customers there is a need to have effective credit management, it also reduces bad debts, as well as optimize working capital of company. Digitization of credit management is using of digital technologies for streamlining, automating, and enhancing the processes that are involved in extending credit, repayment monitoring, risk assessment, and management of defaults. Credit management plays a vital role in improvement of efficacy, accuracy, and security of credit operations for financial institutes, customers and businesses. However, many companies are facing substantial challenges in integration of comprehensive insights from sales as well as financial data hampering their capability of making informed decisions of credit. The adoption of digital technology is transforming credit management substantially as it shapes up how a credit is assessed, monitored, issued and recovered. Such transformation bring opportunity as well as challenges for business, borrowers and financial institutions. Study survey was conducted among 231 people to study Digitization of Credit management.

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