Leveraging Artificial Intelligence (AI): Enhancing efficiencies and greater customer engagement

Introduction

The evolution of artificial intelligence in financial services is a journey spanning multiple decades, with its roots deeply embedded in traditional analytics and credit scoring systems of the mid-20th century. Machine Learning (ML), a cornerstone of modern banking technology, has been actively shaping financial services, building upon decades of algorithmic lending and risk assessment. The recent emergence of Generative AI has introduced new opportunities for financial institutions to enhance their service delivery and operational efficiency.

The impact of AI in financial services has been transformative in addressing the needs of Small and Medium-sized Enterprises (SMEs). Financial institutions are leveraging AI technologies across multiple domains; enhancing credit underwriting and risk management processes, creating personalised products and marketing strategies, and implementing process automation that significantly reduces operational costs while improving customer service efficiency.

Modern businesses increasingly operate through digital channels, from e-commerce marketplaces to cloud-based accounting systems and specialised business management tools. These platforms rapidly incorporate AI technologies, making sophisticated business management tools more accessible and user-friendly for SMEs. The convergence of AI capabilities with existing digital infrastructure is creating new possibilities for both financial service providers and their SME clients.
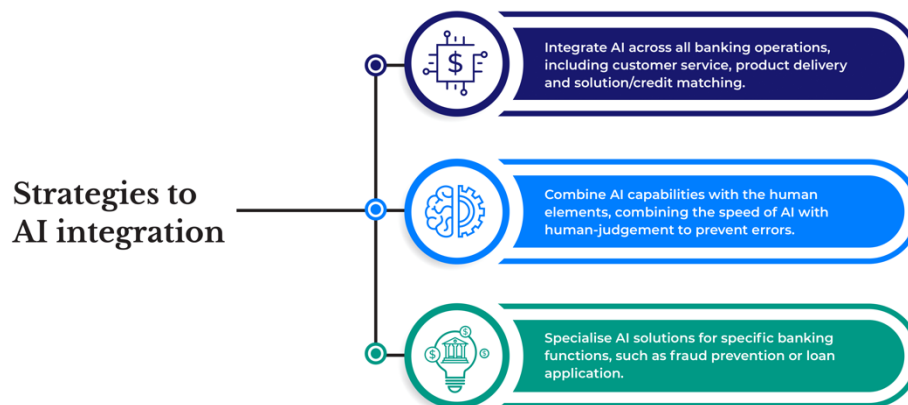
This was discussed at the roundtable "Leveraging AI: Enhancing efficiencies and greater customer engagement" held at the Global SME Finance Forum 2024. Moderated by Mathew Saal, Digital Specialist, IFC. The roundtable saw experts from finance and tech, present use cases while exchanging experiences from crucial challenges they faced and the solutions they have enlisted to broaden financial inclusion for SMEs, particularly in emerging markets. Participants include Stella Fraiha, Head of the Corporate Segment, SICREDI, Ketan Gaikwad, Managing Director and CEO, Receivables Exchange Of India Limited, Bahaa Khashogji, Head of MSME, BSF, Melis Özdeğirmenci, Senior Vice President of SME Marketing, Akbank T.A.Ş., Marcela Pinori, Executive Director of Commercial Solutions in Brazil, Visa, Eamon Scullin, Founder & President, Fern Software, João Tosin, CEO & Co-Founder, Celero, and Jorge Vargas Neto, Founder, Bhub.

This report examines how financial institutions are implementing AI solutions to better serve their SME customers and explores how businesses are integrating AI-powered tools into their operations.

AI and digital banks

The banking sector's adoption of AI has evolved from simple automated processes to sophisticated systems capable of complex decision-making and personalised service delivery. Globally, banks are leveraging AI to transform traditional banking processes, enabling rapid service delivery and improve risk management. Through AI-powered platforms, banks can now process vast amounts of data in real time, leading to more informed decision-making and enhanced customer experiences.

Diagram 1

Strategies to AI integration

- Integrate AI across all banking operations, including customer service, product delivery and solution/credit matching.
- Combine AI capabilities with the human elements, combining the speed of AI with human-judgement to prevent errors.
- Specialise AI solutions for specific banking functions, such as fraud prevention or loan application.

Financial institutions have developed diverse approaches to AI integration, with three primary models emerging as dominant strategies in the market. The first approach integrates AI across all banking operations. Akbank implemented AI throughout customer service and product delivery channels, performing real-time analysis of customer behaviour and automatically matching customers with appropriate product packages from an extensive selection of options. This thorough implementation has resulted in a 6% market share growth for Akbank in micro-segment credit loans and marked improvements in customer satisfaction.

The second model combines AI capabilities with human oversight, as demonstrated by Fern Software's loan processing system. This hybrid approach effectively balances automation with human judgement,
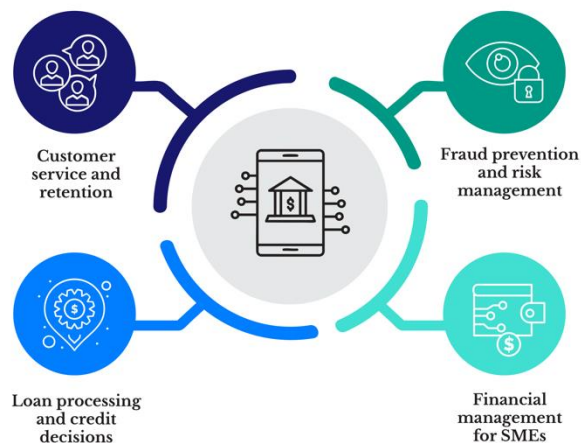
reducing loan decision and underwriting times from weeks to minutes while maintaining critical human intervention points for complex decisions. This model has been used in markets where complete automation may not be suitable or desired due to regulatory requirements or customer preferences.

The third approach focuses on specialised AI solutions for specific banking functions, as illustrated by Visa's fraud prevention system in Brazil. This targeted implementation demonstrates how focused AI applications can address critical banking challenges while maintaining operational efficiency. Their system's ability to analyse hundreds of transaction characteristics in milliseconds shows the potential of specialised AI solutions in high-stakes banking operations.

Diagram 2

Key use cases in AI banking

4 key use areas in AI-powered Digital Banking

Customer service and retention

Fraud prevention and risk management

Loan processing and credit decisions

Financial management for SMEs

Customer service and retention

Akbank's AI implementation extends beyond basic automation to create personalised banking experiences. Their system identifies potential retention risks and initiates appropriate interventions automatically by monitoring activity levels and triggering specific retention programs when customer engagement drops below defined thresholds. For example, when the number of active products drops below four, the system identifies this as a retention risk and launches targeted interventions. By

continuously monitoring customer activity levels and automatically initiating appropriate interventions when needed, the system maintains strong customer engagement.

Loan processing and credit decisions

Fern Software's AI loan decision engine simplifies complex lending processes while maintaining necessary compliance and oversight mechanisms. The financial software company developed a customised AI loan decision engine, working closely with credit unions that had previously relied on disparate, independent loan approval processes.

The system centred on flexibility and customisation, allowing financial institutions to adapt lending parameters based on their specific market needs. Rural areas could customise loan terms for agricultural projects, while urban branches could tailor their offerings for city-based businesses. This level of customisation ensures that lending decisions account for local market conditions and specific business contexts, making credit more accessible to a diverse range of borrowers.

Leveraging Salesforce's CRM capabilities, the platform tracks every interaction from initial borrower contact through loan disbursement and repayment, efficiently managing the loan lifecycle. This complete transaction history improves dispute resolution processes and regulatory compliance, as every decision and interaction is documented. Regulators benefit from the system's audit trail, which provides clear evidence of fair lending practices and proper client treatment.

Their platform uses SMS technology to reach approved applicants, where they can confirm their acceptance via text message and trigger automatic generation of e-documents for signing. This streamlined process can reduce loan approval times from seven days to as little as 15 minutes.

Fern Software's system acts as a standalone solution that integrates through APIs with different core banking systems, enabling rapid adoption while preserving each institution's unique lending requirements. Beyond efficiency gains, the implementation has enabled reduced overhead costs, enhanced customer satisfaction, and improved traceability while maintaining strict regulatory compliance and risk management standards.

Fraud prevention and risk management

Fraud prevention in banking requires increasingly sophisticated detection methods to combat evolving threats. Visa uses AI to prevent fraud by analysing over 400 transaction characteristics in real-time. The system matches these against established profiles and employs cluster-based pattern recognition to identify potential fraud. This comprehensive approach to fraud detection delivers decisions in milliseconds while maintaining high accuracy rates.

Visa's innovation employs AI to make intelligent decisions during periods when primary authorisation systems are unavailable, ensuring continuous service delivery while maintaining security standards.

The effectiveness of this approach is evidenced by its prevention of over $40 billion in fraud in the previous year alone, while simultaneously reducing transaction decline rates and improving customer satisfaction. This balance between security and service accessibility demonstrates how AI can enhance both protective measures and customer experience simultaneously.

In invoice financing, AI-powered fraud prevention takes on additional complexity. The Receivables Exchange of India demonstrates this through their "invoice fingerprinting" system, which locks financed invoices to prevent multiple financing of the same document. With their platform processing and financing 10,000 invoices daily at a growth rate of 100%, traditional fraud detection methods would be inadequate. Their rule engine employs AI to track connections between buyers and sellers, analysing behavioural patterns to identify suspicious activities. The system automatically flags and removes suspicious invoices until they can be properly authorised. This approach builds on five years of accumulated platform data, allowing AI to continuously improve its fraud detection capabilities.

Financial management for SMEs

Tackling SME financial management in emerging markets, where financial literacy and access to sophisticated tools have traditionally been limited, presents a unique opportunity for AI-driven intervention. In Brazil, for example, 85% of companies require financial management knowledge, creating a significant barrier to business growth and development. This challenge is compounded by SMEs' reluctance to pay for services they don't fully understand, necessitating innovative approaches to delivering financial management tools.

Brazilian fintech Celero has addressed this challenge by inverting traditional software distribution models. Rather than creating standalone financial management tools, they integrated their AI capabilities directly into banking channels, recognising that 72% of Brazilian companies use home banking for financial management. This approach makes sophisticated financial tools accessible through familiar interfaces, significantly improving adoption rates. Their solution delivers value on two fronts: providing financial information in an accessible format for non-financial professionals, and helping banks better understand their SME customers' needs. For instance, when serving a small food vendor in southern Tocantins, the system presents financial indicators in straightforward, understandable language, making complex financial data accessible to users without financial expertise.

B Hub's implementation demonstrates another innovative approach to SME financial management through their AI-powered back-office solution. Their system began with a methodical analysis of 124 distinct processes involved in financial administration, leading to the development of an "orchestrator" that standardises and automates these processes. The platform aggregates tax receipts and bank statements from 26 banks and point-of-sale systems, using AI to match transactions and

categorise them accurately. This automation has dramatically reduced processing times - tasks that previously required 20 hours of human effort can now be completed in minutes.

These platforms also addressed the cost barrier that prevented SMEs from accessing sophisticated financial management tools. By integrating directly with banking platforms and automating routine processes, they've made advanced financial management accessible to businesses that previously couldn't afford internal finance teams or traditional accounting services. This has proven particularly valuable in markets like Brazil, where less than half a percent of companies can typically afford internal finance teams.

The impact extends beyond basic financial management to include enhanced credit accessibility. By analysing cash flow patterns and purchasing behaviours, these systems help banks develop tailored products for SME customers. The detailed data analysis enables banks to better understand not just credit needs, but overall business patterns and decision-making behaviours, leading to better financial product development and improved credit access for SMEs.

Implementation challenges and solutions

Cultural adaptation and internal resistance

One of the primary challenges is managing cultural change within companies. There's often internal anxiety about how AI technology will impact existing work processes and how employees can adapt to new systems. Visa addressed this challenge by organising global hackathons open to all employees, not just technical staff, encouraging broad participation in AI innovation. This initiative helped demystify AI technology and showed employees that they don't need to be AI experts to benefit from and contribute to its implementation.

Technical integration and legacy systems

A universal challenge across financial institutions is the integration of AI systems with legacy banking infrastructure. Almost every core banking system in the world faces legacy system challenges. The solution is in careful planning of data migration and system integration, of which data cleansing is a critical success factor. When moving from one system to another, the quality and accuracy of data migration can determine the project's success.

User adoption and training

Financial institutions often face pressure to reduce training budgets, but experience shows this can be counterproductive. People naturally develop routines with existing systems, and changing these patterns requires comprehensive training and support.

Speakers at the roundtable highlighted how users initially complained about the number of keystrokes required in a new system, only to realise their previous process involved many more steps. However, familiarity with the old system made it seem more efficient. This underscores the importance of thorough training programs that help users understand and appreciate the benefits of new AI-powered systems.

Managing AI reliability and risk

Some speakers emphasised the importance of using AI with "parsimony," particularly in financial services where errors can have significant consequences. The risk of AI "hallucinations" or errors in decision-making must be carefully managed, especially when dealing with SME finances.

Organisations have addressed this challenge by implementing testing protocols and maintaining human oversight of AI systems. They've also developed fail-safes and verification processes to ensure AI decisions align with business rules and regulatory requirements.

Conclusion

Generative AI is changing how banks interact with their customers and manage information. While challenges exist in technical integration, data management, and cultural adaptation, the benefits of AI integration are clear and substantial. Success in AI integration requires a balanced approach that combines technological innovation with careful attention to human factors and market-specific conditions.

The experiences of various financial institutions demonstrate that AI is not merely a technological tool but a fundamental component of modern banking strategy. The future success of digital banking will depend on effectively integrating AI while maintaining the trust and satisfaction of their customers.