● **Whitepaper**

Transform Lending with AI and Automation

Introduction

Traditional lending processes are riddled with inefficiencies, such as prolonged loan processing times, manual data handling errors, and difficulty in risk assessment. A fast and smooth borrowing process is paramount for borrowers, and the capacity for quick and accurate processing of loan applications is essential.

The need for improved efficiency has caused a significant transformation in the lending industry. Digital lending platforms offer the quick and seamless lending process that borrowers desire. Because of this, the digital lending market has skyrocketed in recent years and as seen below, it is expected to nearly double in the next five years. For traditional banks to remain competitive, they must embrace the digital journey to cater to shifting customer preferences. Enhancing and accelerating internal processes will translate to client-facing improvements, such as faster turnaround time for credit approval and loan issuance.

Most banks are already on a digital transformation journey. Over the years, banks have adopted new technologies as they emerge, from customer relationship management software (CRM) to loan origination systems (LOS) and PowerBI visualizations. However, to remain competitive with the influx of fintech companies, banks must continue adopting newer technologies like AI to optimize efficiency.

> "AI-powered lending is not just about automating processes; it's about unlocking new insights from vast amounts of data, enabling better decision-making and ultimately fostering financial inclusion."

Digital Lending Market

Market Size in USD Billion
CAGR 11.90%

USD 795.34 B

USD 453.32 B

2024   2029
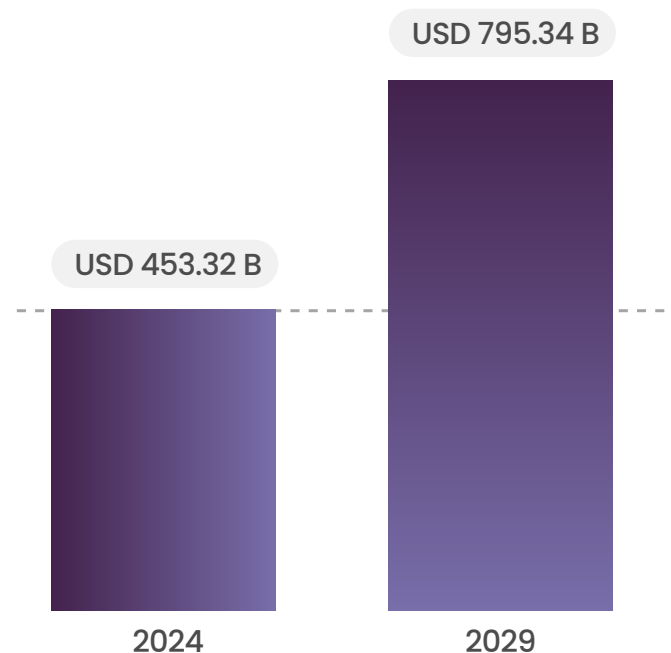
Source: Mordor intelligence

Integrating artificial intelligence (AI) and automation within lending practices can streamline operations, reduce errors, and boost efficiency. This gives lenders a competitive advantage and can mitigate the significant consequences of poor risk management, similar to those observed in the bank failures in 2023.

AI and automation offer numerous benefits across the lending lifecycle:

- **Reduced Processing Time**
- **Enhanced Accuracy**
- **Improved Risk Assessment**
- **Better Customer Experience**

In our whitepaper, "Revolutionizing Lending with Generative AI," we outlined the potential for automation across the lending lifecycle with generative AI. 2023 was a year of exploration, testing, and learning about GenAI in banking. After experimenting with several use cases, we found that GenAI is most effective when combined with other technologies and domain expertise.

In this paper, we will explore each piece of the lending journey and which types of technology can be applied to each workflow to optimize performance and ROI. We will focus on how these technologies enhance speed, accuracy, and efficiency, which are critical for credit decisions.

Automating the lending lifecycle

Origination

Growing business and generating new revenue can be difficult in the competitive lending industry. Banks can improve their origination operations by using AI to enhance prospect screening, sector research and market analysis, and customer application support.

Below are some potential applications of AI and automation in loan origination:

1. **Loan Applications:** Chatbots can interact with potential customers and learn their needs and preferences. They can also guide customers through the loan application process by helping them fill out forms and answering questions. AI can also verify customer information by conducting a natural language conversation through a chatbot.

2. **Product Recommendations:** Further, AI models can evaluate customer data to recommend loan products based on their profile and suggest up- and cross-selling offers to present to existing customers. HSBC does this using AI-powered customer analytics to personalize loan offerings. By analyzing customer data, including transaction history and spending patterns, HSBC can offer its customers targeted loan products and promotions.

3. **Document Processing:** AI and generative AI can accelerate document processing by automatically finding relevant information. Wells Fargo, for example, leverages AI to automate document processing in loan origination to improve efficiency and accuracy.

Evalueserve has partnered with a large Middle East bank's Chief Data Officer (CDO) to do this with generative AI. Users can "chat with their documents," asking a chatbot to extract credit information from large documents, such as loan agreements. Credit analysts can utilize this function to quickly find the data they need while booking a loan on lending platforms.

4. **Market Research:** AI is commonly utilized by strategy and marketing teams for research purposes, leveraging intelligence platforms for insightful market and competitive analysis. These platforms can track news related to companies, sectors, and markets, employ recommendation algorithms to highlight articles, and utilize natural language processing (NLP) to determine the sentiment of articles, among other capabilities.

Similarly, given their similar research requirements, lenders can benefit substantially from adopting intelligence platforms. Tailoring these tools to their specific use case allows lenders to monitor relevant markets and industries efficiently. By integrating generative AI with these platforms, lenders can summarize their research findings and draft client-facing materials, including industry updates and newsletters.

5. **KYC and AML:** Know Your Customer (KYC) and Anti-Money Laundering (AML) processes are critical to ensuring regulatory compliance and risk mitigation. These processes require deep research and enhanced due diligence (EDD) to ensure no stone is left unturned. However, they can be very time-consuming and prone to human errors when done manually. Lenders leveraging AI can streamline the KYC procedure, making it more efficient and accurate. AI technologies such as machine learning algorithms, natural language processing (NLP), and generative AI can automate identity verification and background checks.

Evalueserve uses a generative AI-powered research accelerator in the EDD process to search the web for companies under evaluation. Analysts ask a chatbot questions, and it retrieves answers from search results across several search engines, saving significant time in having to search for answers manually.
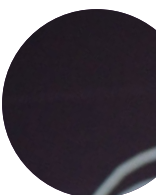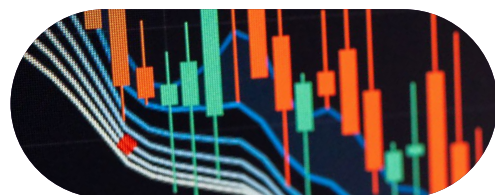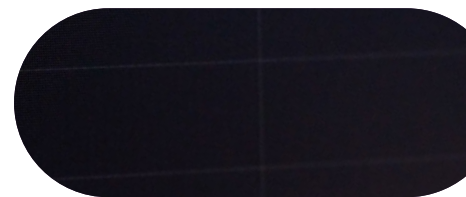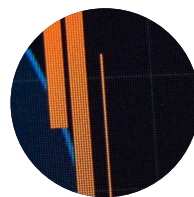
Loan Underwriting

Financial data analysis is at the heart of credit decisioning, as it enables lenders to assess the risk of lending to borrowers. However, when done manually, extracting and spreading data from financial statements is a tedious, inefficient process. Automating this process can save substantial time, but the inconsistencies of financial documents and the need for 100% accuracy mean finding the right technology can be difficult. Different types of technology should be combined with human expertise to maximize accuracy and efficiency.

A leading global bank's wholesale credit team partnered with Evalueserve to automate their financial spreading process, a "key project for the credit services team," said the bank's VP of credit services. Evalueserve embarked on a multi-phase journey with the client, initially implementing our AI-powered spreading tool, Spreadsmart. In the following phases, we integrated Spreadsmart with their existing credit decisioning platform and added additional AI capabilities, ultimately **reducing end-to-end spreading time by 21% while achieving 99.6% accuracy.**

This project is a perfect example of how efficiency and accuracy can be maximized by utilizing different technologies. The entire spreading journey was streamlined by incorporating new capabilities into an existing tool and integrating two different platforms.

Beyond extracting quantitative data, there are increasing opportunities to extract qualitative data from various sources, further automating the underwriting process. We're experimenting with adding additional generative AI capabilities to Spreadsmart to enable it to pull text from documents and automatically draft sections of credit memos.

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AI-Powered Spreading Transforms Lending Operations at Leading Global Bank

The Wholesale Credit and Lending Team at a top global bank faced inefficiencies and errors in their lending operations due to manual spreading. The bank partnered with Evalueserve to automate the spreading process and address these challenges.

Through the initial implementation of Spreadsmart, our automated spreading tool, we **accelerated data extraction by 70% while achieving 99.6% accuracy**. Spreadsmart combines patented deterministic machine learning (ML) with optical character recognition (OCR) and mapping technology with multilevel taxonomy to auto-populate tables for credit memos.

In the project's second phase, we integrated Spreadsmart with the bank's existing credit decisioning platform to help **synchronize data and streamline the spreading process, reducing end-to-end financial spreading time by 21%.** This integration helped the client achieve "a critical milestone in the journey to automate the financial spreading process," according to the bank's Reengineering and Production Management Lead.

In the final phase, Evalueserve incorporated new AI capabilities into Spreadsmart to further reduce manual intervention. Our lending experts worked with our AI/ML center of excellence to integrate three primary use cases of AI into Spreadsmart: table recognition, document categorization, and unstructured text analysis.

READ MORE

21%
Reduction in end-to-end spreading time

70%
Faster data extraction

99.6%
Accuracy

Portfolio Monitoring & Risk Management

The banking failures in 2023 demonstrate the consequences of neglecting risk management efforts, especially in funding, investment, and lending exposures. Lenders need better oversight and real-time insights into their lending portfolios to understand risks and strengthen risk management. The best way to do this is to optimize the collaboration between domain experts and automation. Portfolio monitoring dashboards can be designed for experts to provide the insights they need to make decisions. Automating the data input and calculations behind the dashboards makes these insights as near real-time as possible. One example of automating calculations is a fund finance consolidation tool. Evalueserve has an accelerator built with VBA and Python to automate the manual consolidation of funds' borrowing base sheets and calculation of indirect exposure across all fund finance facilities. The tool helps eliminate manual errors and automatically generates charts and diagrams to aid risk-based analysis and decision-making. We configured this tool to help a leading Canadian bank enhance its risk management process.

We also worked with the bank to configure dashboards for real-time monitoring of portfolio exposure. The bank needed a centralized visualization for monitoring its corporate lending book performance, so we worked with them to create a web-based, scalable solution. The dashboard provides a detailed and interactive view of historical trends for various financial KPIs and actionable insights by sector, team, and more to track early warning triggers.

Generative AI can make critical insights even more accessible by building a virtual expert to retrieve loan information. For qualitative insights, the key to ensuring relevancy is to create a vectorized database with all applicable data, including external data such as credit bureau reports and internal data such as loan agreements and the portfolio dashboards discussed above. When prompted, A virtual expert can pull relevant information directly from this data corpus.

For quantitative insights, there are new use cases of generative AI evolving. One such trend is to "chat with your dashboards." Similar to the "chat with your documents" concept, a chatbot can assist a user in navigating and extracting insights from their dashboards. Another concept in the early stages is "chatting with your data," where users would ask a chatbot about a set of data and receive natural language answers and a visualization. Evalueserve's global head of analytics, Swapnil Srivastava, sees this as the future of business intelligence (BI) tools but acknowledges that the current technology is not there yet.

Loan Servicing

Utilizing AI and automation technologies in loan maintenance processes can help you more efficiently track borrowing facilities to meet regulatory requirements, mitigate credit risk, and improve a borrower's lending journey.

Some key use cases for AI and automation in loan servicing:

- **Automated Payment Processing:** Mortgage firms have started leveraging AI algorithms to automate loan payment processing. This system efficiently identifies and reconciles payments, reducing manual effort and improving accuracy in managing mortgage accounts.

- **Customer Support Chatbots:** Like the loan application use case, banks have started integrating AI-powered chatbots into customer support systems for loan inquiries and assistance. These chatbots are available around the clock to handle customer questions, provide account information, and offer guidance on loan-related matters, enhancing customer service efficiency.

- **Predictive Analytics for Collections:** A few financial institutions have started harnessing the power of AI-driven predictive analytics to anticipate delinquency risks and optimize collections strategies. By analyzing customer behavior and payment patterns, the bank can proactively identify accounts at risk of default and tailor collections approaches to minimize losses.

- **Fraud Detection:** Banks can implement AI-based fraud detection systems to safeguard against loan-related fraud. These advanced systems continuously monitor transactional data and customer activities, detecting suspicious patterns and preventing fraudulent activities such as identity theft or payment fraud, thereby enhancing security measures for loan servicing.

For example, JPMorgan Chase employs AI-based fraud detection systems to monitor transactions for suspicious activity. By analyzing large volumes of data, including transaction history and user behavior, JPMorgan can more effectively identify and mitigate fraud.

- **Personalized Communications:** One financial institution utilizes AI technologies to personalize loan-related communications based on customer data insights. By analyzing transaction history, preferences, and engagement patterns, the bank can tailor communications to provide relevant information, offers, and customer support, enhancing the borrower experience.
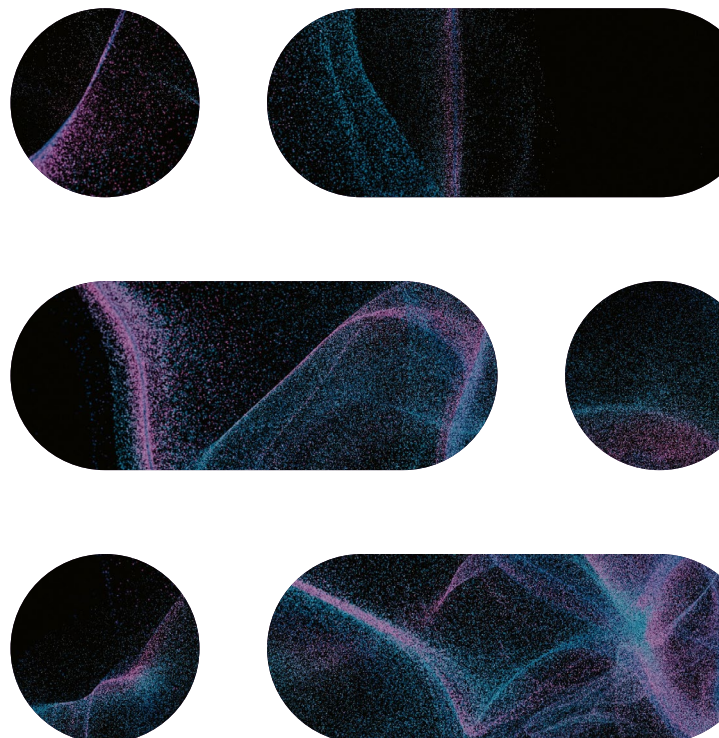
How to Integrate Automation and AI in Lending

Integrating AI and automation in commercial lending is not just a trend but a fundamental shift in how the industry operates. Borrowers have come to expect a quick, seamless experience that can only be achieved with new technology. This whitepaper has highlighted the transformative effects of these technologies, showing how they can lead to more efficient, accurate, and risk-averse lending processes. Financial institutions that embrace these changes are better equipped to meet the challenges of the modern economic landscape and will be at the forefront of the industry.

However, this digital journey can be challenging for banks to navigate independently. Many firms find it difficult, time-consuming, and expensive to build technology in-house as it requires heavy involvement from the lending teams to guide technology teams in developing the right tools. Many lenders partner with vendors instead to manage the process for them.

There are many partners in the lending space. From traditional business process outsourcing firms (BPOs) to research firms, analytics consultancies, system integrators (Sis), and many new AI tech startups, it's a crowded space. Choosing the right partner for your needs is important, but how do you do that?

When transforming processes, you need a partner who understands the business and the technology. The right partner will have a deep understanding of your workflows and flexible solutions to meet your unique needs. Lending solutions are not one-size-fits-all, and your partner should work with you to determine the best combination of technology and domain expertise for your specific use cases. Finally, a true partner will work with you to continuously improve your processes, regularly evaluating new technologies and evolving industry practices.

About Evalueserve

Evalueserve is a global leader in technology-enhanced managed services with over a decade of experience helping lenders transform their operations. Combining the strengths of best-in-class technology and a team of over 5,000 experts, we provide tailored, innovative solutions for each client, ensuring efficiency and return on investment. Our services span the entire lending process, enhanced by tech accelerators such as our AI-powered financial spreading tool, portfolio monitoring dashboards, fund finance consolidation tool, and credit decisioning solutions via strategic partnerships.

Our approach to partnering with financial organizations is guided by our "D3" methodology: Diagnose, Design, Deliver. We engage with clients to fully understand their processes and challenges, diagnose inefficiencies, and identify opportunities for advancement. By merging our deep industry knowledge with technological innovations, we design and deliver solutions significantly improving efficiency and accuracy. We're committed to continuous innovation and the development of new technologies to perpetually augment our offerings. Through ongoing workshops with our clients, we strive to uncover new ways to further boost productivity.

Experts

Vivek Sharma
Vice President, Corporate and Investment Banking

Vivek has over 17 years of experience setting up offshore support teams for global investment banks and managing delivery.

Nishant Sehgal
Associate Director, Corporate and Investment Banking

Nishant has over 13 years of experience in Corporate and Commercial Credit risk function across multiple banks.

Want to learn more?

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