The How To Put AI In Your 2021 FI Business Plan Playbook, a collaboration with Brighterion, examines consumers' shifting online shopping patterns and assesses their interest in using emerging credit solutions at the point of sale. The study was based on a survey of more than 10,000 U.S. consumers.
# The How To Put AI In Your 2021 FI Business Plan Playbook

The How To Put AI In Your 2021 FI Business Plan Playbook is a collaboration with Brighterion, and PYMNTS is grateful for the company’s support and insight. PYMNTS.com retains full editorial control over the following findings, methodology and data analysis.

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American consumers carried some $14 trillion in household debt at the start of 2020 — a 12-year high. The banks owed this mountain of money had good reasons to be mindful about monitoring credit risk, especially after a 10-year run of economic growth. Neither banks nor anyone else realized just how much risk was awaiting them: A pandemic would soon strike, sending the global economy into a recession in a matter of weeks.1

Banks turned to a familiar but blunt set of tools after the pandemic’s onset, offering forbearances on loan and mortgage payments before cutting credit lines, for example. Subsequent economic data revealed such one-size-fits-all responses’ shortcomings, however, as the largest United States banks found that up to 40 percent of loan forbearance recipients continued making payments. Banks set aside large cash reserves — a collective $44 billion in Q2 2020 alone — in anticipation of a wave of defaults that has yet to come.2

Banks certainly cannot be faulted for failing to anticipate the pandemic, but the events of this year have dramatically exposed why banks need better intelligence for forecasting and managing credit risk. They need real-time data that relates to their customers’ specific, dynamic circumstances and the economy’s complexities rather than conventional models and aggregate statistics.

These circumstances have underscored the singular importance of artificial intelligence (AI) in managing credit risk as well as supporting other bank operations. AI can make it easier for financial institutions (FIs) to predict how likely their customers are to make timely payments and improve overall risk assessment capabilities. Better credit management is just one benefit AI can confer to banks, however. The technology can also enable FIs to build predictive models, perform real-time data analysis and improve account engagement.

Most bank executives are well aware of AI’s touted potential. The challenge is separating out the facts from the hype when it comes to genuine machine learning (ML) technologies and implementing them effectively into their existing operations. Not all FIs have the internal expertise necessary to deploy and implement AI-assisted credit risk assessment strategies in a cost-effective manner. How can FIs ensure that they are effectively using AI tools to provide personalized services that can keep customers from failing delinquent while also boosting their bottom lines?

The How To Put AI In Your 2021 FI Business Plan Playbook, a PYMNTS and Brighterion collaboration, provides a roadmap for FIs looking to leverage AI to enhance their consumer credit operations, offering actionable insights into the ways in which AI can facilitate faster, easier and more efficient operations at every step of the customer lifecycle.

This is what we learned.

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How the pandemic has illuminated the need for smarter, AI-based banking tools

An unpredictable, dynamic job market
AI-assisted systems can detect real-time changes in borrowers’ economic well-being as the pandemic unevenly impacts industries, sectors and individual companies.

Rapidly changing consumer finances
AI can discover real-time changes in consumers’ finances, while changes may not show up in conventional credit scoring systems for months.

Unrecognized revenue opportunities
Not all consumers have experienced adverse economic impacts. AI systems can discover prospects for credit-line increases or new lending products and identify demand for new products and services in a time of economic flux.

Digital transformation
AI systems operating as part of digitized end-to-end solutions can reduce the need for paper-based collection or issuing processes and minimize paper’s role in collecting important documents from customers.

A roadmap to **enhancing credit risk assessments** with AI
Artificial intelligence is a multifunctional tool that FIs can use to enhance nearly every aspect of their consumer credit portfolio management. Here are key ways in which the technology can enhance different stages of the consumer credit lifecycle:

- **Application scoring**
  Loan officers can leverage AI systems to make more accurate credit risk assessments at origination.

- **Delinquency risk**
  Account managers can more closely monitor their accounts and take proactive anti-delinquency measures with AI tools.

- **Collections**
  AI can eliminate redundancies in collection agents’ workloads by automatically calculating the optimal amount to collect, the way to collect it and which customers to prompt for payments.

- **Profitability**
  AI can automate account management functions to reduce costs, enhance customer experiences and maximize profitability.

- **Global**
  Maintaining global operations is easier when AI helps FIs comply with institutional credit standards and regulatory expectations.
Intelligent assessments:

CREDIT APPLICATION AND ORIGINATION SCORING
FIs have historically relied on consumers’ credit scores to determine whether to issue loans and extend credit lines. FIs would then offer easier credit access to customers who had consistently made payments in full and on time. They were also more likely to approve customers with more funds in their bank accounts. This reliance on applicants’ payment histories and current financial standings is unsuitable given modern pandemic-induced economic challenges. There is a heightened risk that banks might unnecessarily withhold credit lines to consumers who might be going through temporary financial setbacks but otherwise have stellar long-term potential. The pandemic has triggered widespread job losses, resulting in even the most financially responsible consumers struggling to pay monthly bills. Payment histories and old-school credit scoring models are thus not the best tools to accurately predict banking customers’ abilities to make timely payments.

FIs that use AI can better assess their customers’ credit worthiness by analyzing “alternative data.” Such data might include not only bank records but also transaction histories, their usage of other products and other permissible data feeds. Information like this can help FIs fine-tune their models, powering more accurate predictions of whether loan candidates might be able to maintain their credit lines and under what circumstances they can continue to make payments. Tapping data collected from a wide variety of sources can help FIs extend credit lines to consumers going through temporary financial hardships who are otherwise strong candidates for loans and credit lines. This can have a profound real-world impact on consumers’ access to credit. FIs that use AI-driven credit scoring models can make offers to more customers than those that do not, extending credit access to historically underbanked communities.

Using AI for real-time fraud detection is akin to having a fingerprint scanner that takes customers’ biometric data every second. An AI system that has collected enough information to know how consumers behave online can use their digital “fingerprints” to detect behavioral abnormalities with relative ease. AI systems implemented to identify fraud never stop scanning for it, as do those monitoring consumer credit.

This type of round-the-clock fraud surveillance has a demonstrable impact on both customers’ experiences and FIs’ bottom lines. Fifty-five percent of FIs that have adopted AI systems say those systems have resulted in fewer false positives that decline customers’ legitimate purchases. Thirty-six percent of FIs state that such systems have improved their anti-money laundering (AML) capabilities.
Stopping late payments in their tracks:

MANAGING CREDIT DELINQUENCY RISK
Managing credit delinquency has historically been less about prevention than about cleanup, as accounts fall into delinquency and loan managers have to work with customers to bring them back up to speed. FIs might take the drastic measure of suspending or closing accounts that remain delinquent.

There are two major problems to this retroactive approach for delinquent accounts. FIs cannot preemptively predict whether customers are likely to miss their payments and offer them alternative payment options that might boost their ability to pay, for one, and customers’ credit scores could also decrease because of missed payments. This approach thus not only deprives the FI of the revenue it would have gained but also raises the risk of customers losing their creditworthiness altogether. These negatives could lead to millions in lost revenue for banks that manage large numbers of active accounts and fewer financial prospects for their customers.

Dynamic, AI-driven credit monitoring represents an improvement over legacy methods. AI systems are able to analyze massive amounts of data at rapid speeds to scan for larger patterns in each account holder’s banking and payment habits over long stretches of time. An AI system that has collected enough data can detect “early warning signals” and predict delinquency with a high degree of accuracy well before a consumer ever misses a payment, with some AI systems being able to detect potential delinquencies as much as 12 months before they occur.

### How AI helps manage profitability

![Credit risk at origination](image)

**Customer Experience**

Beyond credit risk: robo-advisers

AI-enabled robo-advisers allow customers to use their FIs’ vast data reserves to guide their financial decision-making. Robo-advisers accessed via mobile devices, computers, tablets or voice-activated speakers are more cost-effective than in-person consulting. Consumers stand to pay up to 70 percent less for access to robo-advisers than they would pay in consulting fees, allowing traditionally underbanked communities to access the personalized financial guidance that has been available to those in higher income brackets for years.

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Using AI to boost ROI: COLLECTIONS OPTIMIZATION
FIs must manage three key business aspects to increase their consumer credit portfolios’ returns and enhance their customers’ experiences while using AI throughout their customers’ credit lifecycles: business profitability, customer experience and global applicability as per countries’ credit regulations and privacy policies. AI can help banks keep on top of these functions while also upgrading the overall customer banking experience.

AI systems can help banks tailor their customer engagement and outreach strategies to maximize customers’ likelihood of making their payments on time. An AI system might analyze consumers’ payment histories and their available funds to determine how much money they might be willing to spend on their monthly bills, for example, and determine that customers would be more likely to pay a $40 bill instead of their usual $50 monthly payment, knowing asking customers to pay this amount would increase FIs’ chances of receiving payments and reduce delinquency risks.

It follows that FIs that use AI to inform their collections operations are able to extract more return on investment (ROI) from their accounts. PYMNTS’ research shows that 63.6 percent of FIs that use AI say their customers’ satisfaction increased, and 23.7 percent say their AI systems reduced the overall risk of their portfolios. It also found that 63.6 percent saw their charge-off rates decline as a result of their AI systems. This demonstrates that AI systems are effective not only in helping banks increase their profitability but also in enhancing account holders’ overall banking experiences.

Driving higher revenues while reducing credit losses and collections costs

The best way to ensure customers’ financial stability is to prevent them from missing their payments in the first place. Ensuring that customers pay on time can be as simple as sending them monthly reminders via text or email that their payments are due in two or three days, for example.

Fifty-one percent of mobile banking app users are using those apps more now than they did before the pandemic began, and they are using them to conduct nearly every transaction and account maintenance activity, largely because they want to avoid exposure to the virus. Sixty percent of all banking customers now use digital channels and 80 percent of their interactions are done online, underscoring how critical it is that banks provide digital banking experiences.

AI systems’ predictive capabilities can help personalize digital banking experiences and increase digital engagement across all banking channels.

Providing enhanced, digital-first customer experiences to match consumers’ increased demands for online transacting, particularly during the pandemic

Another benefit of AI is that it enables the digital-first banking capabilities that customers have come to expect in the pandemic’s wake. Online and app-based banking have been growing more common over the years, and the pandemic has accelerated such channels’ adoption.


How consumers use **mobile banking apps** now compared to before the pandemic

<table>
<thead>
<tr>
<th>Income Bracket</th>
<th>Much Less</th>
<th>Somewhat Less</th>
<th>About the Same</th>
<th>Somewhat More</th>
<th>Much More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Consumers (%)</td>
<td>0.5%</td>
<td>1.3%</td>
<td>47.1%</td>
<td>18.2%</td>
<td>32.9%</td>
</tr>
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</table>

Many banks are also employing omnichannel chatbots to provide a cohesive, multichannel banking experience. These AI-powered, self-learning chatbots can answer customers’ questions, address their concerns and personalize conversations as they interact with customers more. FIs that use omnichannel chatbots like these see three times as many customer conversions and 40 percent greater sales productivity than FIs that do not use them, underscoring AI applications’ ability to enhance customers’ digital banking experiences and ultimately boost FIs’ bottom lines in a remote, digital-first financial environment.

Banks can collect data on customers’ usage of mobile banking apps, desktop sites, voice assistants, text messages, telephones and beyond to assess which channels they prefer and how often they engage with them before using that data to tailor their offerings to match users’ preferences, empowering them to bank how they want.

Several AI-enabled technologies can help accomplish this. Virtual assistants that allow customers to interact with them via voice-recognition technology, such as Amazon’s Alexa and Bank of America’s Erica, enable consumers to interact with their banks through a number of different devices, including their mobile devices, voice-activated speakers and laptops.


Barriers to adoption:

MYTH
VERSUS FACT
A key obstacle that stands in the way of widespread AI system adoption among FIs is simply the lack of understanding about what they are, what they can do and how they enhance credit risk assessment. Many FIs employ technologies such as data mining, business rules management systems and case-based reasoning, falsely believing these technologies to be true AI systems. Only 5.5 percent of them actually employ true AI systems.16

Many other inhibitors keeping FIs from adopting AI systems stem from this lack of understanding. The benefits of deploying AI may seem intangible, but FIs that have adopted the technology consistently report higher revenues and greater ROI. Others say AI’s results are untrustworthy despite the fact that using AI is demonstrably more reliable than legacy methods.

These misperceptions about AI’s limitations are driven by the fact that there are remarkably few professionals with the training and experience needed to effectively design and implement these complex systems. FIs demanding AI expertise are met with a shortage of human talent, leaving them to compete with each other for access to the professionals they need to get their AI operations off the ground.17

Many FIs can benefit from enlisting third-party AI providers for these reasons. Outsourcing AI operations to firms that specialize in it can help FIs avoid the overhead costs of building and maintaining their own AI departments from scratch, leaving them more financial headroom to focus on their own core competencies. It also allows them to benefit from access to trained AI professionals who can help provide the tools and guidance they need to incorporate AI into their business plans.

### Inhibitors of smart agent systems

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Payroll</th>
<th>Fraud detection and analysis</th>
<th>Risk management</th>
<th>Accounts receivable</th>
<th>Accounts payable</th>
<th>Treasury management</th>
<th>Financial planning or analysis</th>
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<tr>
<td>Intangible benefits</td>
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<td>73.7%</td>
<td>55.6%</td>
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<tr>
<td>Workforce lacks necessary skills</td>
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<td>75.0%</td>
<td>57.9%</td>
<td>44.4%</td>
<td>37.5%</td>
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<tr>
<td>Untrustworthy results</td>
<td>100.0%</td>
<td>0.0%</td>
<td>21.1%</td>
<td>22.2%</td>
<td>12.5%</td>
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<tr>
<td>Implementation is too expensive</td>
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<td>100.0%</td>
<td>42.1%</td>
<td>11.1%</td>
<td>75.0%</td>
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<td>30.6%</td>
</tr>
<tr>
<td>Technology is too complicated</td>
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<td>75.0%</td>
<td>36.8%</td>
<td>22.2%</td>
<td>75.0%</td>
<td>14.3%</td>
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</tr>
<tr>
<td>Systems are too complicated</td>
<td>0.0%</td>
<td>25.0%</td>
<td>26.3%</td>
<td>44.4%</td>
<td>25.0%</td>
<td>14.3%</td>
<td>18.4%</td>
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Checklist: Improving AI IQ

FIs face several challenges that tend to hinder their abilities to incorporate AI technology into their broader business plans. Foremost is a lack of knowledge about the benefits they can provide. Here are the key steps that FIs must take to increase their organizational familiarity with AI and reap the technology’s benefits:

— Do your research: Decision-makers looking to increase their organizational AI IQ must research how peer institutions are utilizing AI to improve their consumer credit portfolio operations. They should:
  • Read the latest news regarding AI in banking
  • Review the AI products on the market

— Consult with in-house professionals: Decision-makers must consult with their in-house credit risk teams to assess how AI can improve the FI’s credit operations. This includes speaking with:
  • Loan officers
  • Account managers
  • Software engineers
  • Legal professionals
  • AP and AR specialists

— Enlist third-party assistance: AI professionals are few and far between, but their expertise is necessary to building a comprehensive AI plan. FIs can benefit from using third-party providers specializing in AI, as such collaborations can help them optimize their use of AI for credit operations and increase their ROI.

— Test AI use cases one by one: AI systems can significantly improve business operations, but FIs will benefit from deploying the technology one AI application at a time and then expanding capabilities from there. They should:
  • Run tests
  • Track impact on ROI
  • Implement successful use cases
  • Expand to new business areas

Compliance: Ensuring that compliance operations are met at home and abroad

It is estimated that FIs around the globe will spend a collective $180.9 billion — 57 percent of that amount in labor costs — on their compliance operations by the end of 2020. FIs that operate in multiple countries can face even steeper overhead costs, as they need specialized legal professionals familiar with each country’s domestic regulatory structures.

AI systems can help reduce the cost of compliance procedures. Providing compliance officers and legal teams with AI tools can help them more quickly identify potential problem areas in both new and existing accounts that might need closer inspection, leaving them more time and resources to spend on fixing issues rather than on trying to identify them.
Removing the guesswork from AI adoption

One of the foremost challenges that FIs face when it comes to designing and implementing their own AI strategies is quantifying the ROI they stand to gain from adopting the technology. Many financial professionals understand that AI can enhance their operational efficiencies but often find it challenging to quantify those benefits. This can make it difficult to determine whether their AI investments will yield the results they want, leaving many banks unsure of the extent to which AI can improve their bottom lines.

FIs must take six steps to eliminate this guesswork and build a stronger understanding of how they can leverage AI and the resources they need to implement it.

1. Identify use cases: The act of defining specific operations that banks would like to enhance using AI

The first step banks should take is to identify the use cases to which AI can be applied. They must then determine whether they have the data they need to inform those AI systems about their operations and create a list of which use cases are most viable and which they would like to prioritize.

2. Reach out to third-party providers: Enlist outside help from firms that specialize in AI and AI-related services

The second step would be for banks to enlist third-party providers to more seamlessly feed that historical information into an AI system. This data can offer background information to help AI systems understand the intricacies of banks’ operations. Their third-party providers can use that information to create AI models tailored to their specific requirements.

Beyond credit risk: Marketing optimization

FIs can use AI to optimize their marketing strategy by targeting the right audience and accurately predicting customer behavior. Sites that use AI-driven product recommendation engines can attract up to 24 percent more individual visitors and earn 26 percent greater revenue than sites that do not use such engines, in fact. Similar AI-driven models can also be applied to banking sites to help increase site traffic, help FIs put the right product in front of the right customer and boost sales volumes.19

AI can also be used to predict customer attrition and assess the financial impact on banks’ bottom lines. The same type of holistic data analysis that allows AI systems to predict fraud in advance can also help them determine how many bank customers are at risk of leaving long before they choose to and calculate the financial toll it might take on their bottom lines. This not only helps FIs identify which accounts might need added attention to reduce churn but also helps them make more informed decisions about how churn might impact their business.20

3. Use case overview: A demonstration of how a particular AI model might be applied for predefined use cases for a particular time frame

The third, fourth and fifth steps in this process all relate to data models. Third-party providers can help produce data outputs that demonstrate the potential benefits banks stand to gain from using AI systems. Third-party providers can offer three key outputs to help banks gain a clear understanding of how AI models can improve their operations.

4. Compare: Collect data showing the difference in performance between AI-driven versus legacy methods

These outputs can then be used to illustrate how AI can improve various operations that banks might like to enhance. This would enable banks looking to use AI to make more accurate predictions about customer behavior, such as by anticipating customer turnover in any given three-month time frame.

5. Provide contrast: Offer a clear and quantitative measurement of potential ROI

The gathering and examination of these statistics demonstrates how AI-driven models might enable more accurate predictions than legacy methods and how that improved accuracy might impact their ROI. This helps quantify the financial benefits of adopting AI technology.

6. Deployment footprint: Outline the investments that banks might need to make to develop and deploy their custom AI models

The final step banks and their third-party providers must take is to generate a comprehensive assessment of how much funding, capital and coordination might be necessary for the former to implement their custom AI models. All of this information can help financial professionals make more informed decisions about whether adopting AI-driven operations would help them meet their businesses’ objectives and if it would do so without requiring them to purchase new software or hardware that might have to be integrated into their existing infrastructures.

These key steps can help banks strategize their AI adoption plans and cut through the uncertainty that has previously prevented them from implementing new technologies. They can also open the door to a host of new AI-enabled possibilities that can help banks build stronger businesses.

Beyond credit risk: Proactive fraud prevention and anti-money laundering

AI can analyze geographic data, peer analysis and historical data to enact a more holistic anti-fraud strategy that takes local AML standards into account. Using AI to enhance anti-fraud and AML functions can thereby help FIs avoid any potential regulatory issues that might arise, reduce the risk of punitive fines and protect their customers’ funds and personal information from theft and fraud. It can also equip banks with the technological flexibility they need to anticipate unforeseen fraud issues that might arise and prepare them to take proactive measures against them.21

The COVID-19 pandemic has underscored the need for banks to get smarter about how they manage credit risks and optimize the services they offer to current and prospective customers. Artificial intelligence represents an invaluable asset for FIs looking to improve their return on investment in their consumer credit portfolios, but the true benefit of AI lies in the omnichannel, personalized banking experiences it creates. Banks that adopt AI systems can leverage them to create an entire ecosystem of AI-driven banking and financial services that their customers can access through any of their connected devices. This allows the institutions to take a holistic approach to consumer engagement, bringing their services to customers whether the individuals choose to visit brick-and-mortar branches or prefer to bank from the safety and comfort of their own homes. AI systems can therefore provide the digital-first financial services that customers may need to stay financially stable in a challenging economic environment, and they can lead to more seamless banking experiences for every customer overall.
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