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ACHIEVING HIGH-PERFORMANCE LENDING

The Impact of AI on Lending Efficiency

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The Lending Efficiency Imperative

Community-based financial institutions face a dizzying array of issues spanning economic challenges, changing market conditions and regulatory pressures. Their response to these challenges? Double down on improving efficiency and managing noninterest expenses and costs.

In Cornerstone’s annual *What’s Going On In Banking* study, the percentage of bank and credit union executives who said efficiency, noninterest expenses and costs were a top priority nearly doubled between 2023 and 2024, from 29% to 53% (Table A).ⁱ

Table A: Bank and Credit Union Execs’ Top Concerns, 2021 to 2024

	2021	2022	2023	2024
Cost of funds	8%	9%	45%	70%
Efficiency, noninterest expenses, costs	31%	36%	29%	53%
Interest rate environment	55%	46%	56%	49%
Deposit gathering				48%
New customer/member growth	33%	34%	30%	48%

Source: Cornerstone Advisors

In their pursuit of greater efficiency and growth, many financial Institutions are looking for efficiency improvements within their lending operations. Lenders can see where changes are needed, but many lack confidence in their lending capabilities and have not made the investments and changes in automation and new data sources required to transform their lending processes.

To understand the state of lending processes and the use of loan automation technology in community banks and credit unions, Cornerstone Advisors surveyed senior executives responsible for lending within community-based financial institutions. This report delivers insights and reveals opportunities to improve loan processing to achieve enhanced operational lending performance.

The State of Consumer Lending in Community-Based Financial Institutions

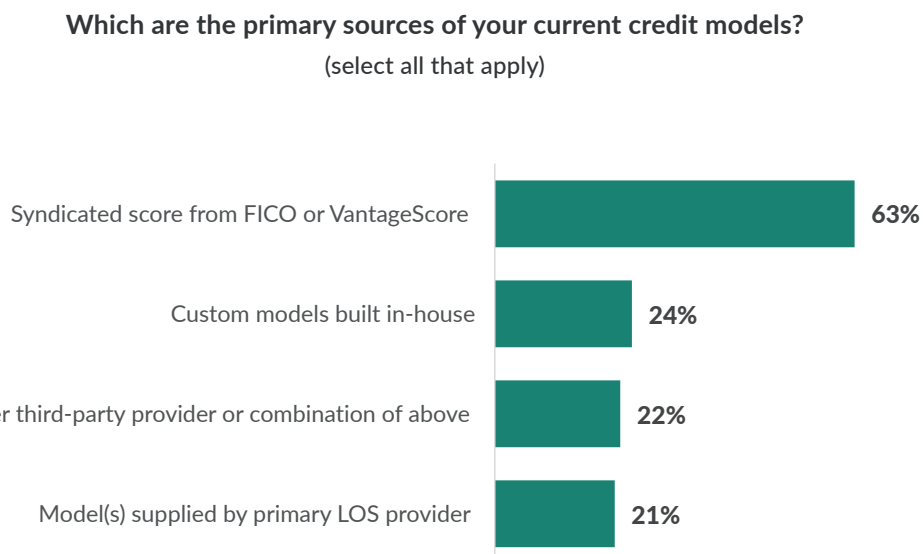
To understand the state of consumer lending in community banks and credit unions, the survey captured executives' perspectives on several aspects of the lending environment, including 1) credit models and data, 2) auto-decisioning, and 3) the use of artificial intelligence (AI) in the lending process.

Credit Modeling and Data

Nearly 9 of 10 community banks and credit unions have at least one credit model for consumer lending. Just 10% believe that they're industry-leading or innovative in their approach to credit modeling—54% said they're "managing," and 36% said they're "reacting." In fact, just 13% said they're very prepared to adapt credit models to changing market conditions.

Roughly a third have a single model or scorecard per credit product or line of business, 1 in 5 has a single model/scorecard for their entire loan portfolio, and the remainder take a hybrid approach. Nearly two-thirds of respondents rely on a syndicated score from FICO or VantageScore, a quarter have custom models built in-house, and 1 in 5 rely on their primary loan origination system (LOS) provider (Figure 1).

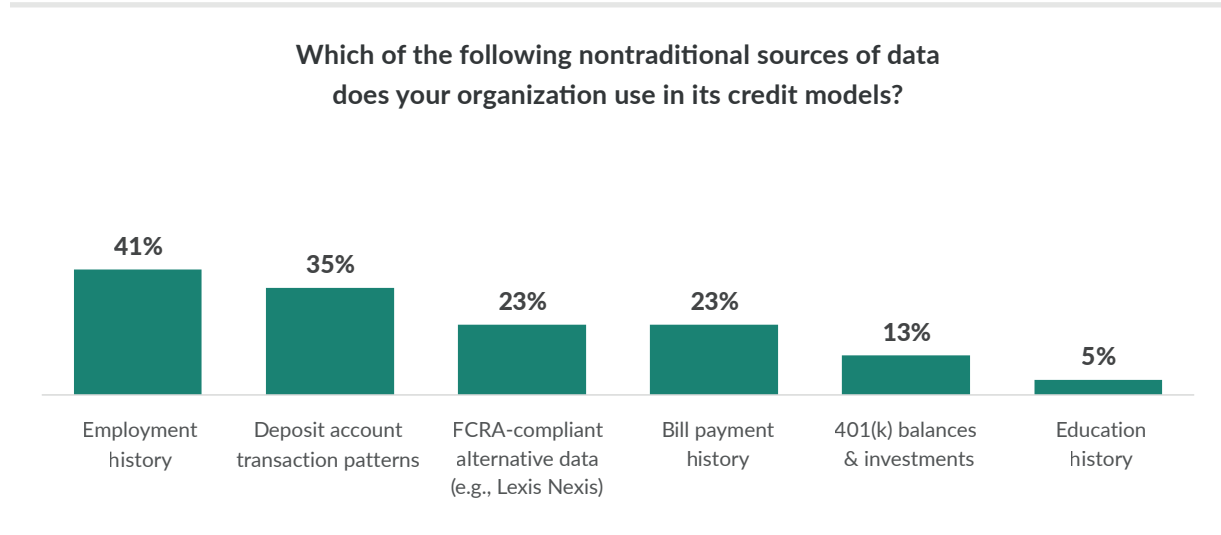
Figure 1: Sources of Credit Models



Source: Cornerstone Advisors

The use of nontraditional data is growing in community-based financial institutions. Two-thirds use at least one nontraditional data source, with employment history and deposit account transaction patterns being the two most popular nontraditional sources (Figure 2).

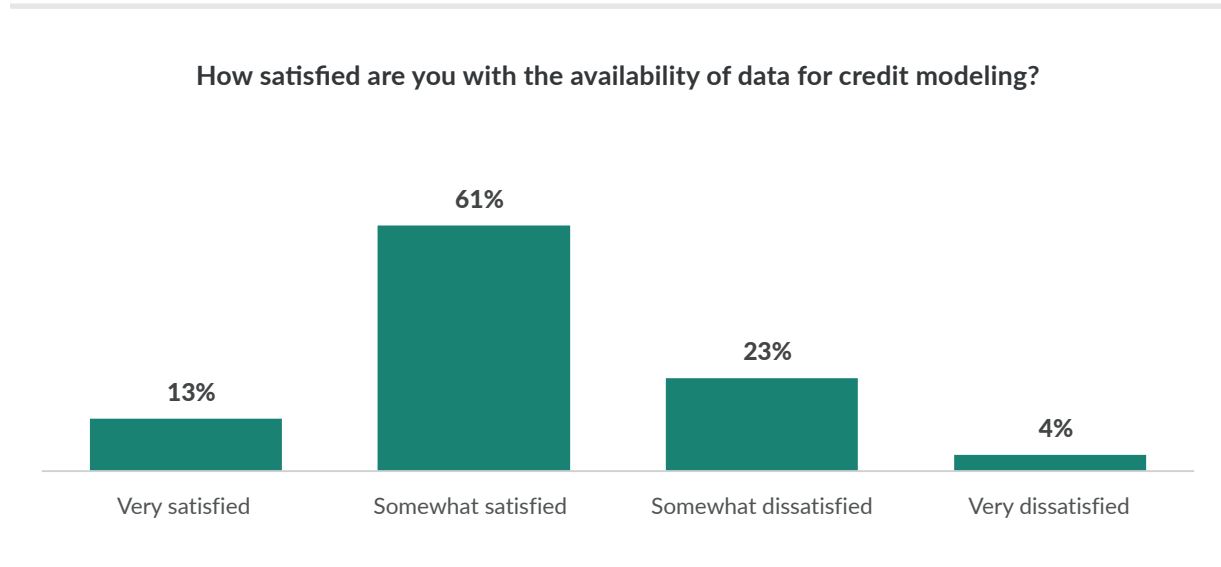
Figure 2: Use of Nontraditional Data Sources in Credit Models



Source: Cornerstone Advisors

Satisfaction with the availability of credit data isn't anything to write home about—just 13% are very satisfied, and 61% are somewhat satisfied (Figure 3).

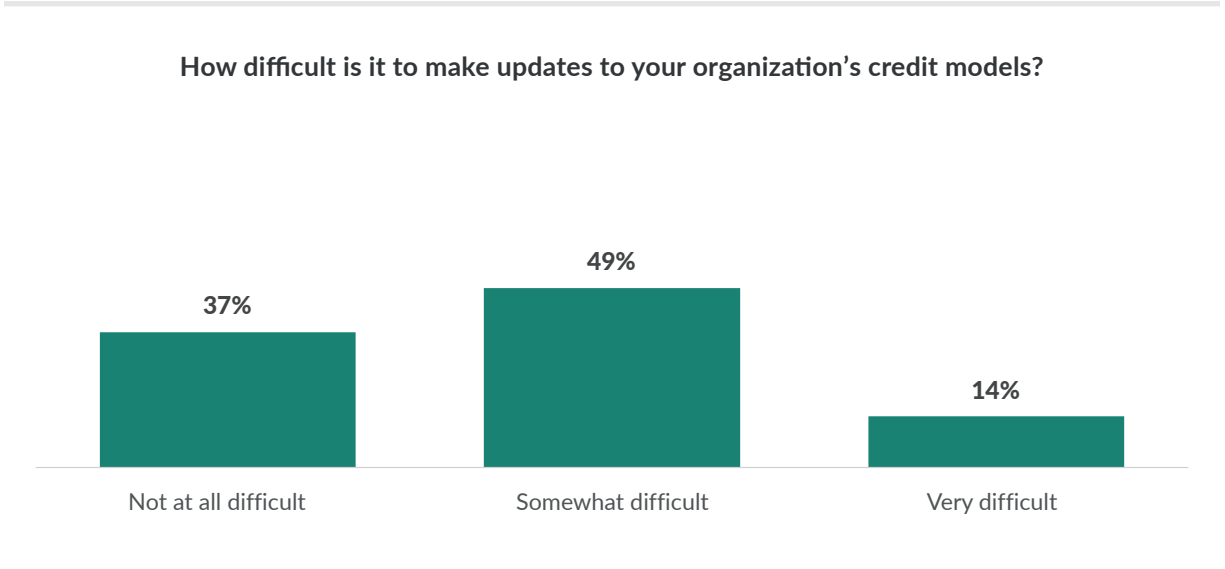
Figure 3: Satisfaction with Availability of Credit Data



Source: Cornerstone Advisors

Nearly two-thirds, however, admit to having difficulty updating their organization's credit models (Figure 4).

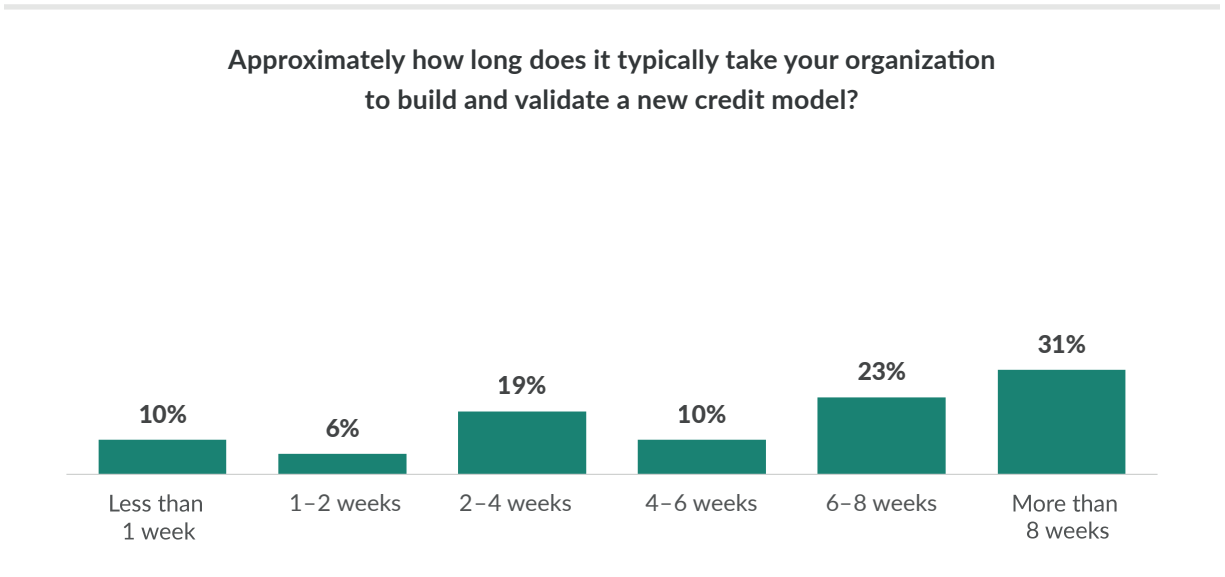
Figure 4: Difficulty Making Updates to Credit Models



Source: Cornerstone Advisors

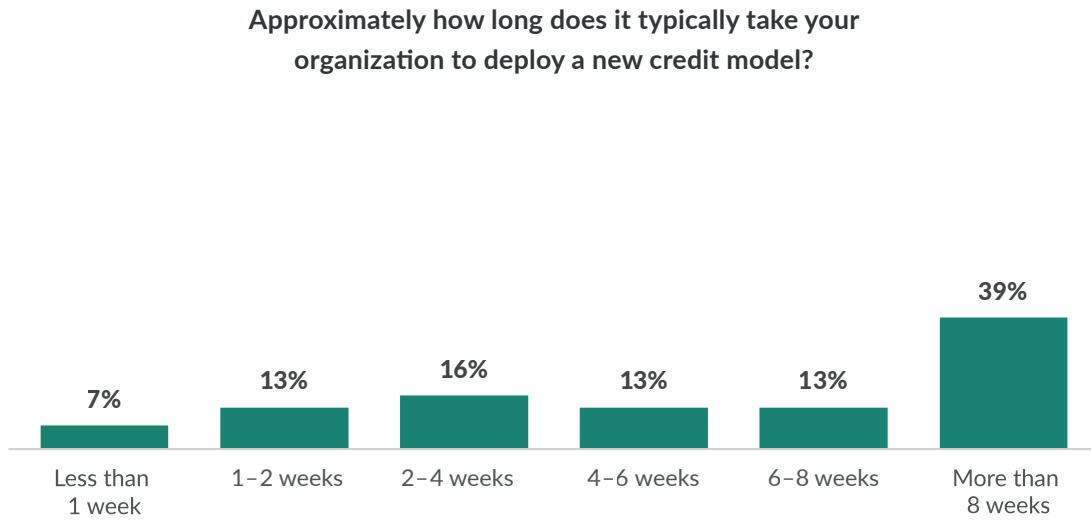
The cycle time for developing and deploying new credit models varies widely across institutions. While 35% of institutions say they build and validate a new credit model in a month or less, more than half said it would take them six or more weeks (Figure 5). Roughly similar percentages of respondents said the same for deploying new credit models (Figure 6).

Figure 5: Time to Build a New Credit Model



Source: Cornerstone Advisors

Figure 6: Time to Deploy a New Credit Model

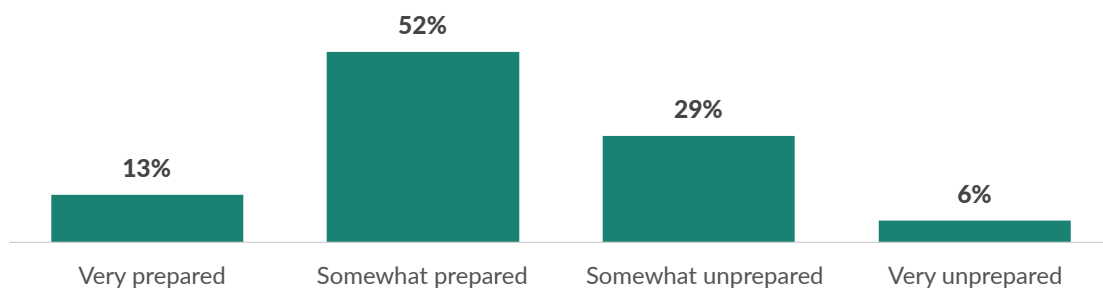


Source: Cornerstone Advisors

Overall, just 13% of financial institutions say they are very prepared to adapt their credit models to changing market conditions with 35% somewhat or very unprepared to do so (Figure 7).

Figure 7: Credit Models Preparedness

How prepared is your organization to adapt credit models to changing market conditions?

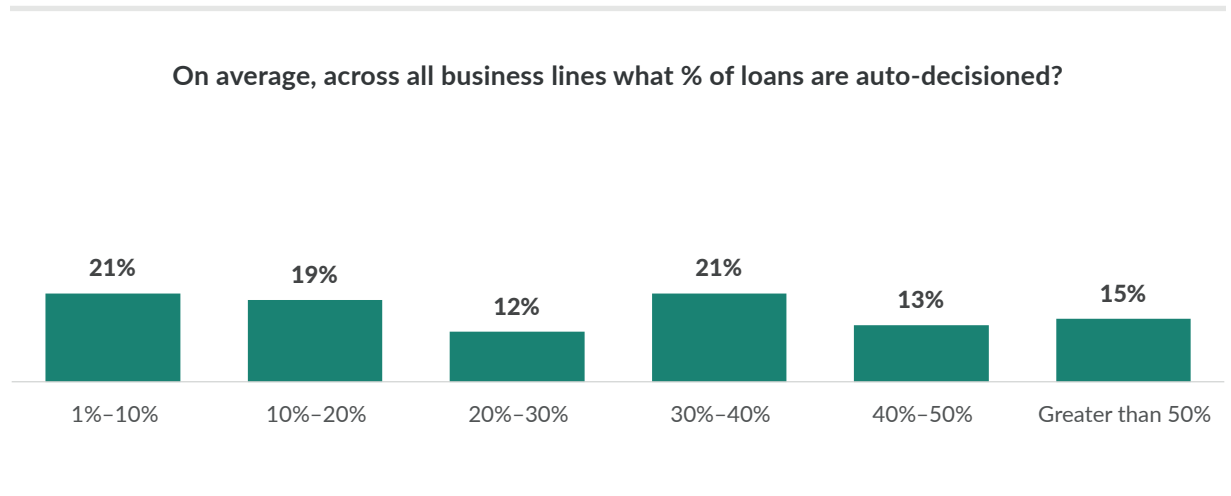


Source: Cornerstone Advisors

Auto-Decisioning

Roughly 8 in 10 institutions generate automated loan underwriting decisions. Of those that do, the percentage of loans auto-decisioned varies greatly—nearly 3 in 10 institutions are auto-decisioning more than 40% of loans across all lines of business. At 40% of institutions, 20% or fewer loans are auto-decisioned (Figure 8).

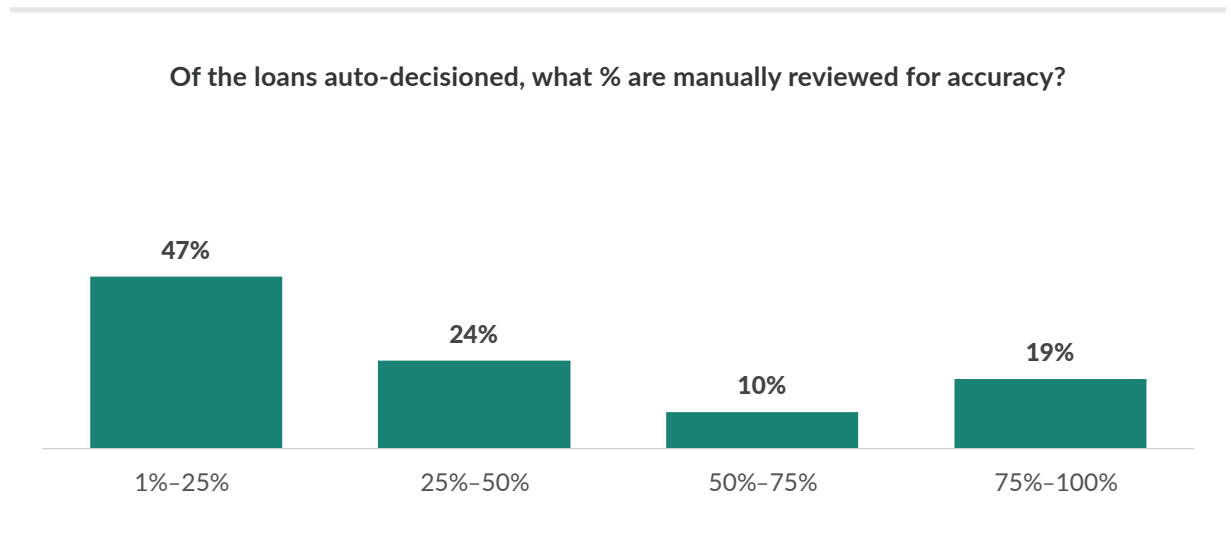
Figure 8: Percentage of Loans Auto-Decisioned



Source: Cornerstone Advisors

Nearly half (47%) of the institutions doing auto-decisioning review no more than a quarter of the auto-decisioned loans, but 1 in 5 manually review nearly every loan (Figure 9).

Figure 9: Manual Review of Auto-Decisioned Loans

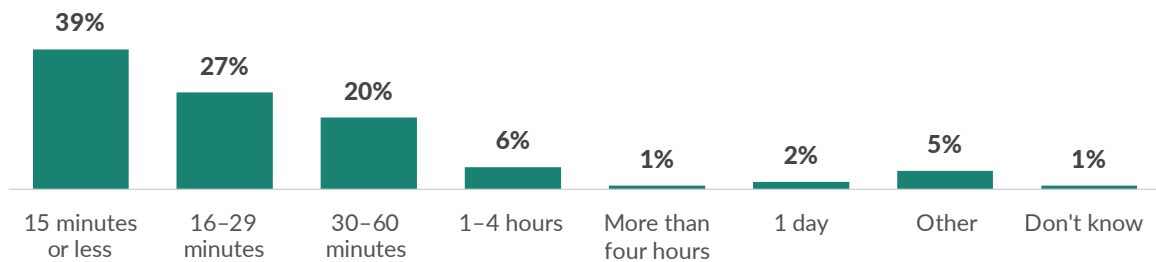


Source: Cornerstone Advisors

For two-thirds of the survey respondents, the manual review of auto-decided loans takes less than half an hour, but for a handful of institutions, the process takes more than an hour (Figure 10).

Figure 10: Time to Review Loans

For manually reviewed loans, what is the average time for review?

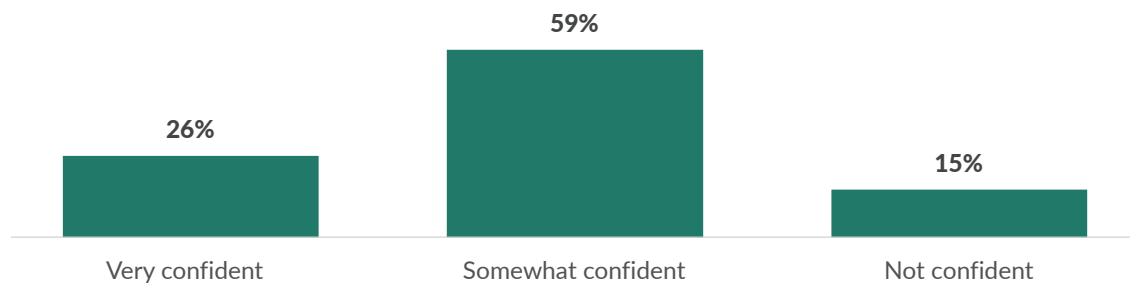


Source: Cornerstone Advisors

Overall, just a quarter said the staff in their organizations are very confident in the output from automated decisioning, with 6 in 10 indicating that staff was only somewhat confident (Figure 11).

Figure 11: Confidence in Automated Decisions

How confident is origination staff in the automated decisions output from the current credit models?

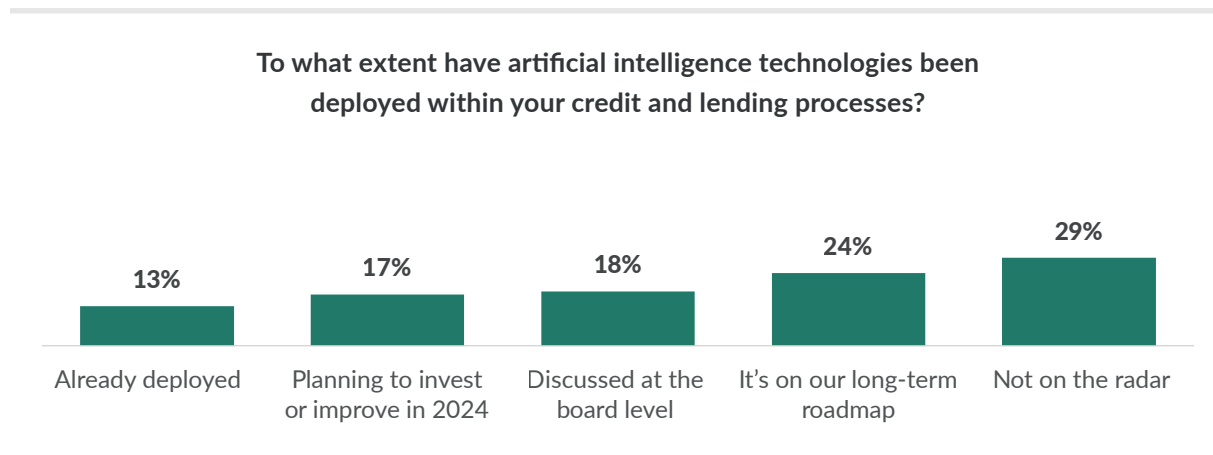


Source: Cornerstone Advisors

AI in Credit and Lending

For all the hype in the press about artificial intelligence technologies, just 13% of community-based financial institutions have deployed the technologies in their credit and lending processes, while 3 in 10 don't even have the technologies on their radar (Figure 12).

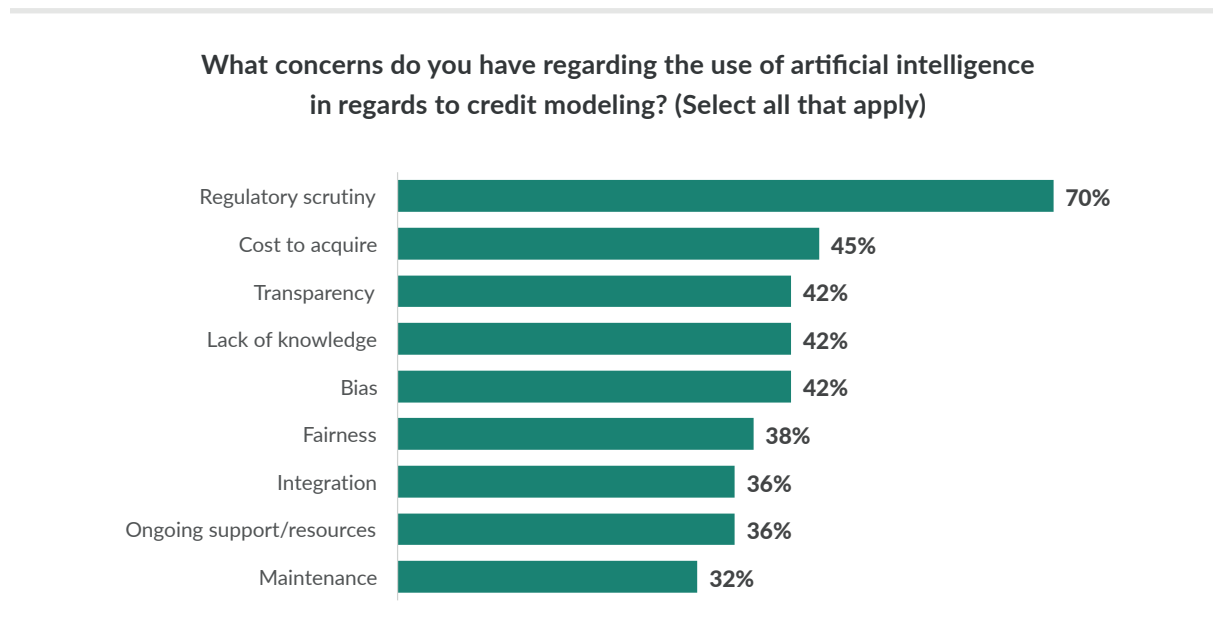
Figure 12: AI Deployment in Credit and Lending



Source: Cornerstone Advisors

Although 80% of respondents believe that AI technologies can and will improve the credit and lending processes, many still have concerns with regulatory scrutiny topping the list (Figure 13).

Figure 13: Manual Review of Auto-Decisioned Loans

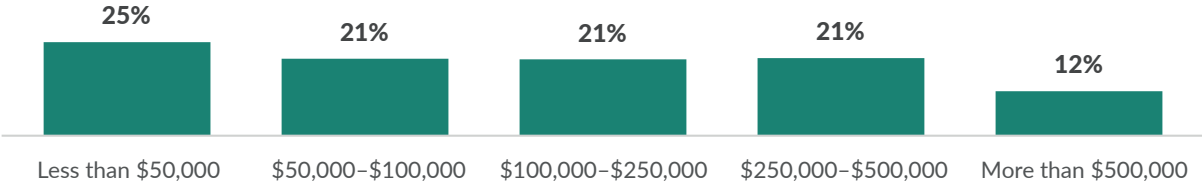


Source: Cornerstone Advisors

Despite their concerns, many institutions are planning significant investments in AI technologies to support their credit and lending processes (Figure 14).

Figure 14: AI Investment Plans

Over the next three years, how much will your organization invest in AI-driven (i.e., machine learning) models?

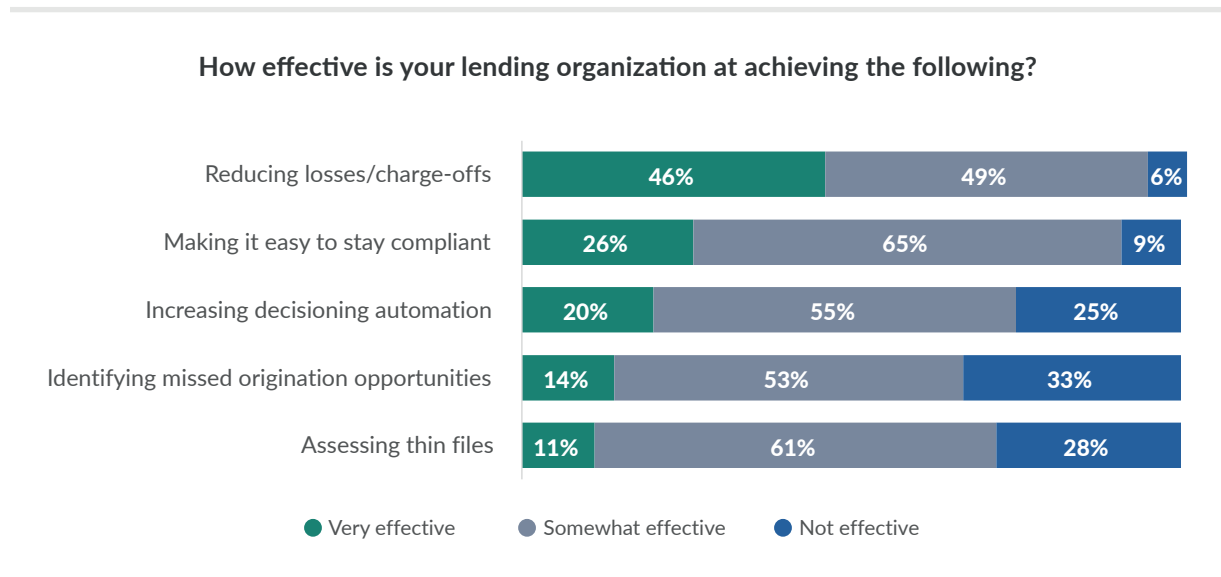


Source: Cornerstone Advisors

The Credit and Lending Paradox

With the challenges related to credit modeling, automation and auto-decisioning, few community-based financial institutions consider themselves very effective at easily staying compliant, increasing decisioning automation, identifying missed origination opportunities and assessing thin files (Figure 15).

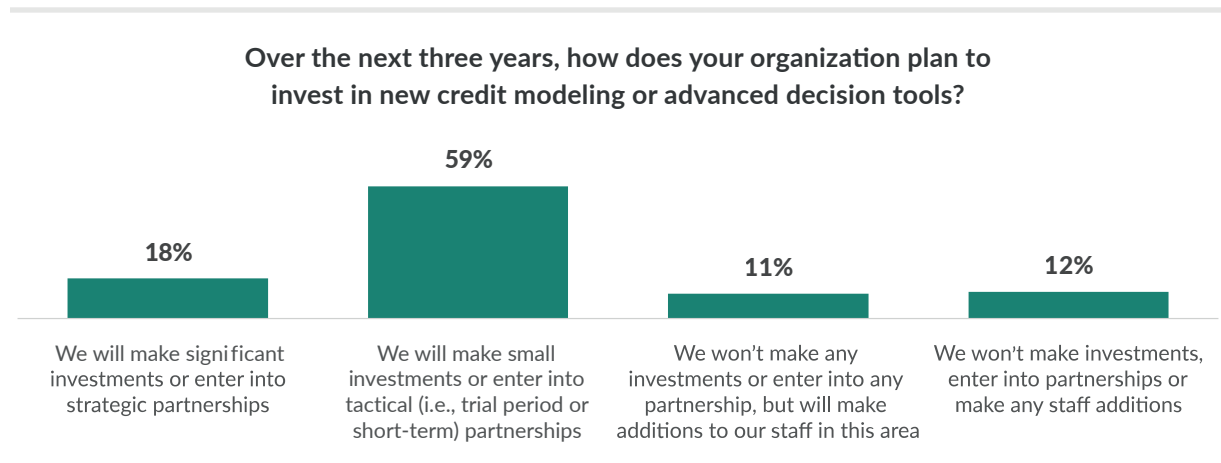
Figure 15: Overall Lending Effectiveness



Source: Cornerstone Advisors

Paradoxically, just 18% of institutions plan to make significant investments or enter into strategic partnerships to enhance their credit modeling and loan decisioning capabilities (Figure 16).

Figure 16: Credit Modeling and Decisioning Investment Plans



Source: Cornerstone Advisors

Using AI to Drive Lending Efficiency

The Use of AI Technology in Lending

It's amazing—and not in a positive way—that financial institutions' use of technology for lending is lacking. A 2022 study by Visa of 13 issuers of small business credit found that seven of them had a completely manual underwriting process—a percentage unchanged from what the Payments Network found in a 2010 underwriting study. The more recent study found that:

“Those [lenders] that do automated decisioning were generally able to auto-decision roughly 50% to 60% of application volume, which drove a more consistent level of decisioning speed and cost reduction while maintaining a stable level of risk performance. The opportunity to automate credit decisioning across multiple channels (e.g., branch, mail, digital, mobile, call center) could translate to higher penetration rates, lower cost of acquisition, stable risk performance and consistent adherence to regulatory expectations when evaluating beneficial owners or guarantors.”

The use of technology and automated decisioning will increase for (at least) two reasons:

- **Efficiency.** The efficiency gains for automated decisioning are substantial. According to benchmark data from Cornerstone Advisors, the number of loan applications reviewed per underwriting full-time equivalent (FTE) employee per month is 3.5 times greater among institutions that use automated decisioning than those that don't.
- **Effectiveness.** According to Qamar Saleem, CEO of the SME Finance Forum, “The emerging use of machine learning models has the potential to increase credit access by more accurately identifying applicants who are likely to repay loans and to reduce the number of people given loans that they are unlikely to repay.”ⁱⁱ

There's also little doubt that artificial intelligence (AI) technologies like machine learning will be a big part of the increase of technology in lending. The adoption of these tools and technologies will present several challenges to financial institutions:

- **Explainability.** Understanding how and why a model arrives at a particular decision or prediction can be difficult. Lenders must ensure explainability (i.e., why a model produces the results it does) in their machine learning models to comply with regulatory requirements, address customer inquiries and maintain trust. Financial service providers cited explainability as the top barrier to adopting machine learning.
- **Transparency.** As Saleem commented, “The black box nature of many machine learning models has focused attention on model transparency as a critical threshold question for both lenders and regulators.” Machine learning models for credit decisioning need to be transparent about how they are making decisions and the reasons certain applicants are denied credit or obtain different interest rates than others.

- **Data availability and quality.** Reading Cooperative Bank President and CEO Julie Thurlow pointed out that a challenge with machine learning is the accuracy, security and availability of the data that feeds machine learning models. Machine learning models rely on large volumes of high-quality data for training and validation, and banks and credit unions may be challenged to access and aggregate diverse and relevant data sets.
- **Model validation and bias mitigation.** Models must be thoroughly evaluated to ensure they do not perpetuate biases, discriminate against certain demographics or exhibit unfair behavior. Establishing robust validation processes and addressing bias concerns are essential to ensuring fair and responsible lending practices.

One community bank executive told Cornerstone about the challenges faced by smaller financial institutions:

“We always feel we’re way behind the curve when it comes to emerging technologies like machine learning. Our executive team is smart, and we watch what’s going on in the industry, but we feel like we don’t have the resources to really be state-of-the-art. That’s why we rely so heavily on third-party vendors. If these vendors aren’t coming to us with these solutions, then there’s no real avenue for us to do it ourselves.”

Because of this vendor dependency, financial institutions must trust that their selected partners remain compliant on an ongoing basis. The chief lending officer at a midsize credit union explained the reality faced by lenders reliant on vendor partnerships:

“Making sure everything’s in place and that we’re compliant is what we worry about. We’ve had regulators come in and say, ‘When you use this model for these loans, how do you know the decisioning engine is reflective of what you’re looking for and how you treat your members? Is it being disparate to certain economic classes?’ As the lender, we have to answer all those questions. We don’t always know the answer because we depend on our vendor for the model.”

These are not new challenges, however—they’re the same challenges financial institutions face with manual (i.e., human-based) loan underwriting. Leveraging machine learning models provides benefits for lenders, including:

1) Improved credit risk assessment. Machine learning models can analyze large volumes of data and identify patterns and correlations that may not be apparent through traditional methods. By incorporating alternative data sources and nonlinear relationships, these models can generate more accurate and comprehensive credit risk assessments, enabling lenders to make more informed lending decisions and better manage risk.

Machine learning models can segment borrowers based on their risk profiles, allowing lenders to offer more tailored pricing and underwriting strategies. By more accurately differentiating between low-risk and high-risk borrowers, lenders can optimize their loan offerings, potentially attracting quality borrowers while mitigating the risks associated with higher-risk applicants.

The Consumer Financial Protection Bureau’s No-Action Letter Program showed that machine learning with alternative data approves 23% to 29% more applicants compared to traditional models and lowers the average annual percentage rate by 15% to 17% for approved loans. The expansion of credit access occurred across all tested race, ethnicity and gender segments.

2) Efficient collections and loss mitigation. Focusing on collections and loss mitigation becomes crucial in a down lending environment. Machine learning models can analyze borrower behavior, payment patterns and external factors to identify early warning signals of potential delinquency or default. By proactively targeting borrowers who may face financial difficulties, lenders can implement effective collections strategies and mitigate potential losses. By using machine learning to identify the optimal treatment and contact strategy for each delinquent account, financial institutions can reduce their net charge-off losses by 4% to 5% (Figure 17).

Figure 17: Machine Learning Impact on Collections

Integrated data sources on client behavior	Multiple machine learning models used to identify features of high-risk accounts	Implemented in the existing collections environment
<ul style="list-style-type: none"> ▶ Customer demographics ▶ Collections activity ▶ Account activity ▶ Payments ▶ Risk ratings 	<ul style="list-style-type: none"> ▶ Low cash flow ▶ More banking products ▶ Previously in collections ▶ High total balance across products ▶ Low investment balance 	<ul style="list-style-type: none"> ▶ Contact-center interface ▶ Banking machine (automated touchpoint) ▶ Contact customer via call or text (automated touchpoint) ▶ Interactive voice response (automated touchpoint)
<p>140 inputs across 15 systems describe profiles of each client on each day in collections</p>	<p>30%-40% improvement in model accuracy versus previously existing models</p>	<p>Implemented in 12-16 weeks</p>

Source: McKinsey Consulting

A Plan to Win

A few community banks and credit unions have the key components in place to pull ahead of the pack regarding lending. They have confidence in their loan origination capabilities to allow them to meet performance targets and react to market conditions. This research demonstrates that most lenders struggle to obtain high efficiency and hit performance targets. Institutions willing to make the investment or a continued investment toward high performance need to consider the following questions:

- Do you have members of your team who can identify what is not working to achieve high performance in your lending operations?
- Do you have the right partners/vendors to deliver the performance you seek?
- Are you operationalizing your new and improved lending capabilities to minimize or eliminate manual reviews?
- Can you update your credit models to changing market conditions and new strategic priorities?

The pressure to deliver improved efficiency will not abate in the coming years. Unfortunately for some institutions, it could lead to an outcome where they are forced to merge or sell their institutions. However, some institutions with the right capabilities in place will sprint ahead of the pack. What is clear is that a change is needed for most lenders at community banks and credit unions.

About the Author

Ron Shevlin | Chief Research Officer

As Cornerstone Advisors' chief research officer, Ron Shevlin heads up the firm's fintech research efforts and authors many of its studies. He has been a management consultant for more than 30 years, working with leading financial services, consumer products, retail and manufacturing firms worldwide. Prior to joining Cornerstone, Shevlin was a researcher and consultant for Aite Group, Forrester Research and KPMG. Author of the Fintech Snark Tank blog on Forbes, Shevlin is ranked among the top fintech influencers globally and is a frequent keynote speaker at banking and fintech industry events.



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About Cornerstone Advisors

For more than 20 years, Cornerstone Advisors has delivered gritty insights, bold strategies and data-driven solutions to build smarter banks, credit unions and fintechs. From technology systems selection and implementation to contract negotiations, performance improvement, vendor management, strategic planning, and merger and acquisition services, Cornerstone combines its expertise with proprietary data to help financial institutions thrive in today's challenging environment.



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About Zest AI

Since 2009, Zest AI has been pioneering and perfecting AI technology with a mission to broaden access to equitable lending with smart, inclusive and efficient AI-automated underwriting. A proven partner to credit unions and other lenders with over 500 active models, Zest AI has been helping clients decrease risk and boost equity throughout the lending process to build durable businesses. Offering innovative, intelligent solutions across underwriting, fraud, portfolio insights and more, this U.S.-based CUSO is headquartered in Los Angeles, Calif.



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Endnotes

ⁱ www.cornstone.com/whats-going-on-in-banking-2024

ⁱⁱ https://bit.ly/Uplinq_FairAccessibleCredit_CornerstoneNew



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