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Artificial Intelligence and Banking

Will AI and Robots Replace Bank Employees?

When people hear the term *artificial intelligence*, they often think of science fiction movies and TV shows depicting a world where robots have taken over as the dominant intellectual force. But AI isn't nearly this scary or dramatic in the real world.

In fact, AI is simply the next progression in a 100-year technology timeline, according to G. Michael Flores, the CEO of Bretton Woods, Inc. This tech timeline started with electricity and the automobile in the early 20th century. It then progressed to air travel and atomic energy by the mid-20th century and computers and the Internet by the late 20th century.

Effects on Bank Employment

Here in the early 21st century, the next steps in the tech timeline are artificial intelligence, advanced robotics, blockchain, and autonomous transportation. So how might this next wave of technological innovation affect the financial services industry? In particular, what impact might AI have on jobs and employment at community banks?

A report issued earlier this year by Autonomous Research estimates that 1.2 million banking employees will be exposed to AI technologies in the front, middle, and back office. The report states that these functions will experience productivity gains—or unemployment, depending on your vantage point—of between 20 percent and 40 percent.

More specifically, the report predicts that AI will dislocate seven out of 10 front-office banking jobs. This includes 485,000 bank tellers, 219,000 customer service reps, and 174,000 loan interviewers and clerks. These employees will be replaced by chatbots, voice assistants, and other automated technologies, according to the report.

In addition, the report predicts that 96,000 financial managers and 13,000 compliance officers will lose their jobs to AI-based anti-money-laundering, anti-fraud, and compliance and monitoring software programs. And an estimated 250,000 loan officers will be laid off due to AI-based credit underwriting software.

On the flip side, a separate study conducted by Accenture predicts that banks that deploy AI effectively will realize a net gain in jobs of 14 percent, along with a net gain in revenue of 34 percent by 2022. For example, if a bank uses AI software to generate suspicious activity reports, it will probably need human employees to interact with regulators about the reports.

And in its *Future of Jobs Report*, the World Economic Forum lists "business and financial operations" at the top of its employment outlook across job families, with a projected job growth rate of 492 percent.

Benefits for Banks

There's no question that replacing some employees with AI and robotics can result in benefits for banks. For example, robots don't get sick or take vacations, quit to take another job, require training, or ask for raises or bonuses.

In the near future, most experts predict that banks will use AI primarily to handle routine tasks like data entry, document preparation, and loan decisioning for less-complex credits.

A good example is using robotic process automation (RPA) software to handle core conversions after a bank

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CECL is Coming

Is Your Bank Ready for This Seismic Shift?

Historically, banks have based credit loss reserves on the amount of loan losses they've incurred in the past. However, this will soon be changing—and this change will represent one of the biggest shifts banks have faced in decades.

The change is a result of the Current Expected Credit Loss (CECL) standard issued two years ago by the FASB. The new CECL standard will require banks to calculate reserves based on expected future losses rather than on incurred past losses. It's estimated that banks' Allowance for Loan and Lease Losses (ALLL) could increase by up to 50 percent or more under CECL.

Some CECL Background

CECL was adopted largely in response to the financial crisis of 2008–2009. Between 2004 and 2007, loan loss reserves at FDIC-insured lending institutions shrank by 10 percent while loan volumes soared by 44 percent. Incurred loss accounting "was not in step with the significant expansion of credit risk leading up to the crisis," said FASB Chairman Russell Goldman.

CECL is intended to correct this mismatch by mandating improvements in accounting for credit losses. It will require lending institutions to capture, analyze, interpret, and store more data as they assess potential losses whenever putting financial assets on their books instead of setting aside reserves only when losses appear probable.

Specifically, you will need to create a lifetime expected loss estimate model that considers historical experience, current conditions, and reasonable and supportable forecasts. In essence, you'll have to estimate future loan losses for the life of every loan you make.

Implementation Timelines

Banks that file with the SEC must comply with CECL after December 15, 2019, while other banks have an additional year to comply. This might sound like it's a long way off, but given the complexity of implementing programs to comply with CECL, it's not too early to start the planning process now.

Here are five steps to get you on the road to CECL implementation:

1. Form an implementation team. Preparing for CECL compliance is a massive data-driven exercise, so the more hands on deck, the better. By including stakeholders from across the organization, you'll get unique perspectives and understandings on the implementation challenge.

2. Determine your data requirements. This will likely be the hardest and most time-consuming aspect of the process. Start by organizing loans according to different types—C&I, CRE, ADC, etc.—and then pool loans to more refined levels to see which types of loans share similar risk characteristics.

3. Decide on a methodology for projecting credit losses. You will be allowed to continue using your existing methodology under CECL, whether this is a loss method, migration or vintage analysis, discounted cash flows, or probability of default and loss given default. You might decide to use a different methodology for CECL. In any case, your method will need to be modified in accordance with the new CECL standard.

4. Identify a technology partner. You may need help from a third-party source in order to handle the data collection and analysis tasks required for CECL compliance. Look for a technology partner that provides a comprehensive and proven solution—from risk management to profitability analytics—that's both simple and scalable.

5. Adjust your reserve. Once you've made a reasonable and supportable assumption about the anticipated direction of loan losses, you'll need to make a one-time adjustment to your loan loss reserve upon CECL adoption. You can revise your forecasts and loss estimates over time as conditions evolve and you capture more data.

It's More Than Just Compliance

While it's easy to view CECL strictly as a compliance issue, your bank can reap numerous benefits from your investment in CECL implementation. These include more accurate budgeting and forecasting, better risk analysis and strategic planning, and improved profitability.

Please contact us if you have more questions about preparing for CECL compliance and implementation.

Impact on Bank Operations

The FASB's Current Expected Credit Loss (CECL) standard will have a major impact on banks' operations, particularly in the following three areas:

1. **Data:** CECL will require a stronger focus on both the quality and volume of data, as well as data lineage.
2. **Modeling:** Banks will be required to modify or devise new models to estimate not only existing losses but also forecasted lifetime losses.
3. **Regulations:** CECL will be just one part of a wider interrelated set of bank regulatory demands.

Should You Partner With a Fintech Firm?

Innovations in digital banking are moving at breakneck speed, forcing many community banks to plant their digital flag in the sand. In short, your bank can be an early adopter, fast follower, or late adopter of digital technology.

Banks that aren't in one of the first two categories risk being left behind in the digital banking revolution. However, most community banks don't have the internal resources to develop new digital banking products themselves.

Win-Win Partnerships

To overcome this challenge, many community banks are forming strategic partnerships with fintech companies that specialize in creating digital banking products and services. This can be a win-win for both banks, which lack the necessary technological expertise, and fintech firms, which often lack the funding, customer relationships, and trust that most community banks enjoy.

For example, a community bank in Florida has partnered with a fintech provider to offer small business loans with a 10-day application period. This has cut the bank's loan application turnaround time in half, giving it a strategic advantage over other banks in its market area.

In a recent survey of community bankers conducted by the American Bankers Association, seven out of 10 bankers said they plan to introduce digital small business products sometime in the next year. Fintech firms could be a useful conduit for offering these products.

Highly Collaborative Partnerships

As you consider forming partnerships with fintech firms, keep in mind that these tend to be more complex than most vendor relationships. They are usually highly collaborative partnerships in which the fintech may receive access to the bank's core systems and operations.

This makes performing thorough due diligence on potential fintech partners crucial. You must ensure that they are financially sound and have sufficient security and compliance processes in place to satisfy bank regulators. Also be sure to carefully check a fintech's references before entering a partnership.

Generally speaking, the younger the fintech firm, the higher the possibility that they have a less-robust security and compliance environment. If you're considering partnering with an early-stage fintech, make sure their CIO is experienced and their risk management system is adequate.

Don't Play Digital Catch-Up

Determining how your bank will stay relevant in the new digital banking world of the 21st century is a critical decision you should make sooner rather than later. Otherwise, your bank could be playing digital catch-up for years to come.

The Future of Banking and AI

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acquisition. This includes migrating all customer account information to the acquiring bank's core system—an extremely expensive and time-consuming process that AI can handle much faster and cheaper than humans.

In fact, one of the biggest potential benefits of AI for community banks is the ability to free up employees from performing routine tasks so they can spend more time enhancing the customer experience. More than half (57 percent) of bank employees who responded to the Accenture survey said they think AI will expand their career opportunities.

But what about using AI to handle what are usually considered the emotional aspects of a job, like dealing with unhappy customers? Traditional wisdom would suggest that humans are better suited for these jobs, but some experts aren't so sure. They point out that by its very nature, AI is unemotional and thus often better equipped to handle these kinds of situations.

For example, Mitsubishi Financial Group is using an AI-powered robot, nicknamed Nao, to greet customers when they enter some bank branches in Japan. Nao, which "speaks" 19 languages, tells customers about different bank services and even analyzes customers' emotions based on their facial expressions and tone of voice.

Executives Safe … for Now

It's worth noting that AI and robots aren't expected to threaten bank white collar and executive jobs anytime soon. While AI can be taught to generate a particular outcome, it's not yet equipped to handle the complex duties and decision-making responsibilities of bank executives.

Among the top future job skills listed in the World Economic Forum *Future of Jobs Report* are complex problem solving, critical thinking, creativity, cognitive flexibility, and people management. Bank jobs that require skills like these will likely remain safe from the threat of AI for the time being.

But it's clear that banking in the future will require employees to learn new technology skills that many don't currently possess. Forward-thinking banks should start planning now for how they will attract and train these kinds of employees.

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Legislation Relieves Bank Regulatory Burden

On May 25, legislation was signed into law that relieves some of the regulatory burden community banks have faced since passage of the Dodd-Frank Act eight years ago.

Many industry observers believe that the Economic Growth, Regulatory Relief, and Consumer Protection Act will make it easier for community banks to lend money to creditworthy customers. This, in turn, will enable banks to better serve their communities.

However, the Act is not a widespread repeal of the Dodd-Frank Act, as some mistakenly believe. For example, it does not completely repeal the Volker Rule, although this was the original goal of some legislators.

Here are a few of the legislation's main provisions that will affect community banks:

- The total consolidated asset threshold for compliance with certain prudential standards has been increased from $50 billion to $100 billion immediately. It will be increased to $250 billion 18 months after the Act's implementation date.
- The total consolidated asset threshold for required periodic performance of internal stress testing has been increased from $50 billion to $250 billion.
- The total consolidated asset threshold to comply with the Federal Reserve's Small Business Holding Company Policy Statement has been increased from $1 billion to $3 billion.
- The total consolidated asset threshold to qualify for an 18-month examination cycle by prudential regulators has been increased from $1 billion to $3 billion for banks that are well managed and well capitalized.
- Banks with less than $10 billion in total consolidated assets will be considered in compliance with capital and leverage requirements even if their tangible equity falls to an amount that causes their community bank leverage ratio to exceed 10 percent.
- Certain banks with total consolidated assets of less than $5 billion will be subject to reduced call reporting requirements.