# Special Report: Fintech

## *Credit Union Management*

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## FIGURING OUT FINTECH

How to better understand emerging technology and which tech to watch.


PLUS

# Figuring Out *Fintech*


EXPERTS SHARE HOW CREDIT UNIONS CAN BETTER UNDERSTAND EMERGING FINANCIAL TECHNOLOGY AND WHICH TECH TO WATCH.

**BY CELIA SHATZMAN**

Practically no industry has gone untouched by rapidly changing technology—certainly not the credit union industry. To help credit union leaders truly understand how financial technology is impacting their organizations and how to make the most of it, we turned to fintech leaders to share their advice.

## FINDING YOUR WAY AROUND FINTECH

Attending conferences and learning events are table stakes for CU leaders who want to stay on top of industry challenges and trends. "I encourage those leaders to also attend some of the fintech conferences outside [the credit union industry] because I think it helps open the eyes of CU leaders to what's happening [elsewhere]," says Brian Kaas, SVP/corporate development at CUESolutions provider TruStage™ Ventures, Madison, Wisconsin. He also recommends that they join TruStage Ventures' Fintech Forum (*tinyurl.com/trustage-fintechforum*).

Collaborating with those who are immersed in the emerging technology space is also key for CU leaders, and so is talking to their peers. "That is a very powerful network for credit unions," says Kaas, "to understand challenges that other CUs have encountered too and help along with fintech partnerships."

Kaas believes there are four very broad but significant emerging technologies and trends that credit unions should be tracking now. "One is the emergence of embedded finance," he says. "That is financing and lending moving closer to the point of transaction and to the point of sale.

"We're working within TruStage to find opportunities for credit unions to participate in that world of embedded finance," Kaas adds.

"Two is the utilization of artificial intelligence and machine learning across a very broad component of services and solutions. Three is the move towards instantaneous decisioning and advanced underwriting when it comes to lending. Four is one that's been out there a while but quietly continues to make advances, which is the use of blockchain as a technology—which is different from cryptocurrency, which is a use case for blockchain," he explains.

On the compliance side, Kaas is tracking potential regulation around the use of AI and the use of alternative data for underwriting. "There are certain privacy concerns that this technology can create. We want to ensure the technology is not used in a way that could have unintentional, discriminatory impacts. Obviously, the regulators share those concerns."

Another area that is garnering attention is how state and federal CU examiners are viewing fintech partnerships. "I think the NCUA has done a really nice job of taking a leadership role around the topic of fintech," Kaas says. "They've created [the role of] director of financial technology. So, we spend time with the NCUA on [fintech] topics.

"And lastly," he notes, "we're seeing a growing number of credit unions that are interested in investing in fintech companies and monitoring how the state and federal rules are going to evolve to better enable that to happen."

## CONTINUING FINTECH EDUCATION

There are several tech and regulatory areas CUs should be diligently monitoring, according to Vladimir Jovanovic, VP/innovation for CUESolutions provider PSCU (*pscu.com*), St. Petersburg, Florida: digital payments, blockchain technology, open banking initiatives, optimization via artificial intelligence and machine learning, and cybersecurity's role in digital finance. Developments in these areas significantly influence the trajectory of the dynamic financial landscape, he says.

"For example, the recent arrival of the Federal Reserve's FedNow Service expanded the ability to send and receive funds in real time, 24/7/365—and credit unions that track this expansion are well-positioned to act strategically to deliver the benefits of faster payments to their members, among other technological advantages," Jovanovic says. "Additionally, keeping a pulse on regulatory shifts is vital for compliance, security and competitiveness. The CFPB may soon be releasing language that could help shape consumer rights related to sharing consumers' financial data. Staying close to topics such as this one will ensure CUs are ready for any changes that may be required by the CFPB."

CUs should focus on emerging technologies with the greatest potential to heighten member experiences and mitigate fraud risks. "The developments around open banking efforts as well as advancements and innovation in generative AI, combining large language models with natural language understanding and machine learning, are particularly promising," Jovanovic says. "While leveraging AI and ML to analyze large amounts of digital and biometric data can help deliver a better member experience, it can also be more effective at keeping fraudsters at bay."

As an example, Jovanovic says that PSCU is working alongside CUs to leverage proprietary AI models and machine learning capabilities to better understand fraud trends and help CUs identify potential fraud risks with a high degree of speed and accuracy.

Fintechs play a pivotal role as the driving force behind many emerging technologies. "These nimble and innovative companies are adept at addressing specific gaps in the financial industry or enhancing existing processes," Jovanovic says. "... Collaborating with fintechs allows credit unions to offer competitive, innovative solutions—driven by leading-edge technologies—to deliver on expectations for fast, seamless member experiences."

## ENCOURAGING INNOVATION

Understanding emerging financial technologies is imperative in our fast-evolving financial landscape. "From my experience, including being the founder of Geezeo (acquired by Jack Henry in 2019), a personal financial management fintech, I've seen firsthand the transformative power of innovation," says Peter Glyman, managing director of corporate strategy at Jack Henry (*jackhenry.com*), a CUES Supplier member headquartered in Monett, Missouri.

It's helpful for CUs to nurture an internal focus on digital transformation and innovation. "Having dedicated teams within the credit union centered on innovation ensures that the institution is always at the forefront of technological trends," Glyman says. "Embracing a collaborative spirit is equally crucial. By forging strategic partnerships with fintechs or other tech providers, CUs can combine the agility and innovation of startups with the stability and trust they've historically offered to their members."

Technological advancements, along with regulatory changes, are shaping the future of financial services. Glyman shares the emergence of open banking, which provides third-party access to financial data through application programming interfaces, and API-driven digital banking frameworks as examples. "[These technologies] are revolutionizing how financial data is shared and accessed, bridging the gap between credit unions and pioneering fintech solutions," he says.

Credit unions should also stay on top of cutting-edge security features and data security compliance. "As more services transition online, innovations like biometrics and AI-driven identity checks are becoming indispensable tools for digital identity verification. Monitoring developments in self-sovereign identity will be necessary. The global emphasis on data privacy, highlighted by regulations such as Europe's GDPR (General Data Protection Regulation, effective 2018) and California's CCPA (the California Consumer Privacy Act of 2018), underscores the importance of robust data protection protocols."

Another area to watch, Glyman notes, is decentralized finance—which uses secure distributed ledger technology and removes centralized institutions from financial transactions—and blockchain. "Although nascent, DeFi promises to redefine traditional financial structures and must be monitored closely," he says.

## ADVANCING WITH AI

Glenn Grossman, director of research at CUESolutions provider Cornerstone Advisors (*crnrstone.com*), Scottsdale, Arizona, agrees with predictions that AI will have a major impact on financial technology. "This is beyond credit unions; this is broader than the industry itself," he says.

But there's plenty of misinformation along with the hype. "Anything that has to do with data and analytics is getting relabeled as AI, and that could be a harmful thing for organizations because a lot of people don't know how to see the difference.

"AI is considered exciting and novel, especially compared to traditional, predictive analytics," Grossman says. As a result, CUs should do their due diligence to confirm whether they're really working with AI, particularly in the credit risk area.

"Can AI help? Maybe, but you must ask yourself what you are going to get out of it. Will AI tell you whether this person is a good credit decision? The core of this decision is fundamental predictive analytics that have been in existence for decades. Maybe there are machine learning models in use, but ChatGPT and things like that have no role in figuring out if I'm going to pay my bill next month."

If there's one AI application that CUs should act on sooner rather than later, it's in the communications service area with chatbots. "Like any technology, you need to have a plan for it," Grossman says. "Make sure you're applying good management principles deploying it. If it doesn't align with your business model, you could argue it's not even worth investing in, but it's good to keep an eye on it."

**Celia Shatzman** *has penned stories on topics ranging from beauty to fashion, finance, travel, celebrities, health and entertainment.*

## MORE ON FINTECH

Navigating Economic Challenges With Fintech Partnerships (*cumanagement.com/0823finpartners*)

Video: Three Important Findings From Jack Henry's 2023 Strategic Priorities Benchmark Study (*cumanagement.com/video081623*)

Putting Intel Behind AI Decisions (*cumanagement.com/0823intel*)

Podcast: The Value of a 'Can-Do' Mindset for HELOCs And Fintech (*cumanagement.com/podcast147*)

Building a Fintech Framework (*cumanagement.com/0723fintechinst*)

Your Next Hire? A Chatbot (*cumanagement.com/032023blog*)

On Compliance: CFPB Could Propose Giving Big Tech Access to Credit Unions' Core Systems (*cumanagement.com/0223oncompliance*)

Podcast: With Fintech, Knowledge Is Power (*cumanagement.com/podcast142*)

Video: Three Things CEOs and Execs Need to Know About Fintech (*cumanagement.com/video010323*)

# A Credit Union's Guide to Brute Force Fraud

*By Patricia (Trisha) Wells, VP, Fraud Strategy and Engagement, PSCU*

In recent years, financial institutions (FIs) have grappled with a complex and evolving cybercrime challenge — brute force attacks on cards. This type of attack — a direct threat to credit unions and their members — is surging. Now is the time to understand warning signs and embrace innovative solutions to defend against the disruptive impacts of these types of attacks.

## Defining Brute Force Fraud

Brute force fraud involves perpetrators using iterative trial and error tests on partial card information to validate credit or debit card data that was obtained illicitly – often through criminal techniques such as phishing or skimming. The fraudsters aim to profit off the acquired information before the card issuer becomes aware of the fraudulent activity and closes the compromised account.

The card testing tactics used in brute force fraud are also referred to as "BIN attacks" – because perpetrators use a technique where they input the initial six to eight digits of a card, known as the bank identification number (BIN), into a scripting program. Then, this automated program subsequently generates various combinations for the full card number, security code and expiration date, which then undergo validation through card-not-present transactions.

The methods used in card testing can differ with each brute force fraud attempt. Trial transactions may be channeled through legitimate and well-known merchants, or via fictitious ones created specifically for fraudulent purposes. The testing phase can involve a few test merchants and transactions on a large population of cards, or it might incorporate a more diverse range of merchants and transactions on a smaller subset of cards.

Despite fraudsters' hopes of gaining access to high-value card data, brute force fraud is an industry-wide threat that spares no one. Every credit union and member are susceptible to these attacks. Even inactive cards can be ensnared, as the sophisticated software employed by fraudsters can identify valid card details regardless of activation status. Brute force fraud assumes unpredictable forms and affects everyone involved in financial transactions, including unsuspecting merchants, cardholders and FIs.

## Mitigating Card Fraud Risks

While there is no foolproof defense against brute force card fraud, credit unions can proactively adopt measures to reduce the likelihood of successful attacks. One effective strategy may be implementing card number randomization, which minimizes vulnerability to attacks that target sequentially ordered cards. Moreover, avoiding batch issuance of expiration dates and opting for randomized dates can provide an additional layer of defense.

In addition to preemptive risk reduction, proactively monitoring for brute force fraud attacks and analyzing any suspicious trends is crucial for acting quickly and minimizing damage. These attacks may reveal themselves through distinct patterns, such as a sudden surge in authorization declines, often linked to sequentially ordered cards. Other red flags include a surge in low-dollar transactions within a short timeframe and a rise in errors related to Card Verification Value 2 (CVV2) and expiration dates. Leading-edge technologies, particularly machine learning, can play a pivotal role in analyzing data to detect patterns indicative of brute force card fraud.

## Responding During an Attack

Credit unions have several courses of action when confronting brute force attacks, and the right response is one that demonstrates a commitment to upholding both member service and card security. One strategic response entails establishing global rules for protection once a pattern is identified from a brute force attack. These rules, uniformly enforced across the network, serve to decline or closely monitor transactions associated with the attack. This proactive approach minimizes losses within the institution and prevents similar vulnerabilities in others.

Another course of action is immediate card reissuance, a preemptive measure aimed at thwarting follow-on fraud, which is a subsequent wave of fraudulent transactions that might stem from the initial attack. Alternatively, FIs can leverage robust monitoring systems to bolster the security of compromised cards. An integral part of this particular response strategy is implementing a tagging system, which provides analysts with a powerful tool to meticulously monitor affected cards, manage losses effectively and establish a comprehensive reference for future actions.

## Adapting to a Changing Landscape

While credit unions are already engaged in measures to prevent and recover from fraud, cybercrime threats evolve constantly – and brute force attacks are on the rise. Before an attack happens is the best time to evaluate whether your fraud and risk mitigation portfolio is keeping pace with the expanding fraud landscape. Collaborating with a trusted fintech credit union service organization (CUSO) like PSCU can help strengthen credit unions' fraud management strategies. The right partnerships will customize and enhance fraud-fighting efforts, empowering credit unions to effectively combat the escalating challenges of brute force fraud and other threats.

***Patricia (Trisha) Wells** is the VP of Fraud Strategy and Engagement at PSCU. She provides strategic thought leadership for new and existing partners and is responsible for fraud strategy design, mitigating losses on behalf of financial institutions. Trisha has 35 years of financial services experience, 27 of which have been with PSCU.*


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# Navigating *Emerging Tech*

CUs NEED TO STAY ON TOP OF FOUR KEY TECHNOLOGIES TO STAY COMPETITIVE.

**BY BRIAN KAAS**

The financial landscape is rapidly evolving, with emerging technologies reshaping the way credit unions operate and engage with their members. To stay competitive, credit unions must understand and harness these technologies.

**Embedded Financing:** The concept of embedded financing involves integrating financial services directly into the point of sale and other merchant experiences. Retail giants like Walmart, Apple and Amazon are using embedded finance to offer instant financing solutions and other rewards programs during the purchase process. CUs must recognize the potential threat and explore opportunities to participate in the embedded financing ecosystem to ensure they remain relevant to their members. TruStage™ Ventures has invested in various embedded financing platforms including Affirm, CarSaver and Union Credit and is pursuing ways for CUs to participate in those platforms as a financer.

**Artificial Intelligence and Machine Learning:** Credit unions are leveraging these technologies to improve back-office functions and enhance member engagement. For instance, call centers are using AI to answer routine questions, freeing employees to focus on more strategic work. Machine learning is contributing to more accurate and efficient underwriting processes and is enabling credit unions to offer highly personalized member experiences.

**Instantaneous Decisioning and Advanced Underwriting:** By delivering swift loan decisions, credit unions can keep pace with consumer expectations for rapid service while boosting their own efficiency. CUs are also leveraging new data sources and solutions to better evaluate underwriting risk to improve loan performance while helping serve more members.

**Blockchain:** While cryptocurrencies like Bitcoin have drawn the limelight, blockchain offers broader potential for streamlining, managing and securing many banking processes. CUs that incorporate blockchain solutions can improve efficiency and security while reducing cost in areas like record-keeping and identity verification.

## IMPACTS ON CREDIT UNIONS

Several barriers can hinder credit unions from embracing these technologies. These include the overwhelming number of fintech options, limited budget and staff capacity for new projects, conservative approaches to innovation, and size limitations for smaller credit unions. But adopting emerging technologies will help keep credit unions at the forefront and deliver on member needs and expectations. The key lies in prioritization and focusing on strategic partnerships that address specific needs and challenges.

Partnering with fintech companies offers credit unions a pathway to resolving some challenges. These partnerships can revamp the digital experience for members, introduce operational efficiency through automation, tap into younger demographics, and accelerate growth by expanding membership and lending opportunities.

The fintech landscape, however, is vast, and credit unions face the challenge of identifying the right partners to suit their strategic goals.

TruStage Ventures has been actively investing in fintech companies since 2016, seeking to bridge the gap between credit unions and technology solutions. Through initiatives like the Fintech Forum (*trustage.com/ventures/fintech-forum*), TruStage aims to foster collaboration and innovation between credit unions and fintech startups. Additionally, the focus TruStage has on integrating scalable technologies into the CU space can help credit unions overcome project fatigue and achieve sustainable growth.

By investing in carefully selected fintech companies, building ecosystems to foster innovation and integrating various technologies, TruStage seeks to empower credit unions with the tools needed to thrive in this era of technological transformation.

Emerging technologies are reshaping the financial industry, and credit unions must proactively adapt to these changes. Overcoming barriers through collaboration, partnership-building and prioritization will enable credit unions to navigate the evolving landscape successfully, meet member expectations, and continue to build and retain relationships in the digital era.

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### MORE ON FINTECH

Building a Fintech Framework (*cumanagement.com/0723fintechframework*)

Putting Intel Behind AI Decisions (*cumanagement.com/0823intelbehindai*)

Tech Time: Embedded Finance Is the Path to the Next Generation of Members (*cumanagement.com/0323techtime*)


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# Achieve 'First-App' Status With *Open Banking*

STAY RELEVANT, AND CAPITALIZE ON NEW INNOVATIONS.

**BY JACK HENRY**

By integrating new solutions through open banking, you can gain efficiencies, create a unified omnichannel experience, compete more effectively and set your credit union apart.

As we round out 2023 and look to 2024, almost all financial institutions (90%) plan to embed fintech into their digital banking experiences over the next two years, according to the 2023 installment of our Strategic Priorities Benchmark Study (*tinyurl.com/jh2023study*).

In fact, 65% plan to embed payments fintech. Credit unions, in particular, are looking to embed digital marketing and consumer financial health fintech. This comes as no surprise given the new payments rails emerging online, including FedNow (*explore.fednow.org*), and the maturing of such open-loop P2P alternatives as Ingo (*ingomoney.com*).

## FIGHTING FINANCIAL FRAGMENTATION WITH OPEN BANKING

The proliferation of financial data exchange in the U.S. has made it easier for consumers to share their account information with a wide range of providers.

Even before rates began to rise in 2022, deposits held at community and regional financial institutions were being displaced by a long list of new competitors and disruptors. The average American consumer uses 15 to 20 financial service providers and 14 financial apps, with Gen Y and Gen Z couples using upwards of 30 to 40 financial providers, according to Forbes (*tinyurl.com/forbes21art*).

This level of financial fragmentation makes it difficult to know where consumers stand with their money or which steps they should take next to improve their financial health.

Financial fragmentation, inflation and the higher cost of living drove a decline in financial health in 2022—the first decline of its kind in the last five years—resulting in 70% of Americans being considered financially unhealthy, according to Financial Health Network (*finhealthnetwork.org*).

Though technology has fueled fragmentation, the right technology can also provide relief by helping you become the financial hub for your members.

As a financial hub, you can deliver the one app your members open when they want to see their complete financial picture, gaining you "first-app" status. Powered by open banking and account aggregation within your digital platform, you can become their single source of truth.

When that account aggregation relies on open banking and secure data connections rather than screen scraping, you're improving reliability and data access for your members. They gain greater visibility into their financial wellness and more control over what they're sharing; you unlock relationships and growth opportunities for your credit union.

## WHAT'S NEXT

Product innovation and differentiation are key drivers in 2023.

Strategic agility and the ability to offer your members the most relevant, high-grade fintech solutions in meaningful timeframes will be vital. Embedded fintech strategies will be tailored to specific segments and require a coherent application programming interface strategy and open banking platform for timely, third-party integrations.

Successful credit unions will use open-banking rails to solve financial fragmentation, achieve first-app status, eliminate inbound screen scraping and reclaim their spot at the center of members' financial lives.

By doing so, your members will be empowered with a full, 360-degree view of their finances and to share and control all of their financial data easily and securely in one place—far ahead of any mandates from the Consumer Financial Protection Bureau (*cfpb.gov*) centered on open banking and Section 1033 of the Dodd-Frank Act (*tinyurl.com/1033consumeraccessrules*).

## HOW TO FIND FINTECH PARTNERS

Credit union CEOs rely on a mix of resources to find fintech partners, including peer referrals, industry associations, consulting services and core providers.

As momentum builds for simpler, faster and cheaper ways to pay, the challenge will be developing a payments strategy for the near- and long-term that keeps pace with innovation and evolving user expectations—especially around digital wallets.

*__Jack Henry__ (jackhenry.com) is a CUES Supplier member.*

## MORE FROM JACK HENRY

Strategic Inflection Points in 2022 Drive Market Shifts in 2023 (*cumanagement.com/090623blog*)

Why Modernization Should Include Leadership and Technology (*cumanagement.com/0823techtime*)

Video: Three Important Findings from Jack Henry's 2023 Strategic Priorities Benchmark Study (*cumanagement.com/video081623*)

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# find the right fintech partners

The Jack Henry™ 2023 Strategic Priorities Benchmark Study indicates bank and credit union CEOs rely most on peer referrals, industry associations, consulting services, and core providers to find fintech partners. Where should you start?

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