

# THE IMPLICATIONS OF UNCERTAINTY

---

Middle Market Companies  
Reckon With Risk and Reward



# TABLE OF CONTENTS

# THE IMPLICATIONS OF UNCERTAINTY

Middle Market Companies Reckon With Risk and Reward

<p>08 <b>AI-ID</b> Era of AI Uncertainty Calls for Traceable, Reliable Anchors of Data Shaunt Sarkissian, CEO</p>	<p>28 <b>Galileo</b> Technology and Strategy Can Unlock Data Insights Derek White, CEO</p>	<p>50 <b>Mangopay</b> Mitigate Uncertainty With AI and Real-World Understanding Maciej Pitucha, VP of Product and Data</p>	<p>70 <b>Thredd</b> The Data Revolution: Changing the Landscape of Financial Transactions Oliver Dean, Chief Administration Officer</p>
<p>12 <b>Banyan</b> Navigating Uncertainty: The Power of Data in Business Decision-Making Michael Budde, COO and CFO</p>	<p>32 <b>i2c</b> Customer Data, Technology Keys to Optimizing Profitability and Managing Risk Amid Uncertainty John Bresnahan, Global Head of Operations</p>	<p>54 <b>NCR Voyix</b> Navigating Uncertainty: Empowering Small Business With Tools and Support Doug Brown, Chief Product Officer, Digital Banking</p>	<p>74 <b>Trustly</b> Navigating Business Uncertainty With Reliable Open Banking Data Alex Gonthier, Founder and CEO</p>
<p>16 <b>Boost Payment Solutions</b> Quality Data, Technology Pave the Way for Improved B2B Payments Mariana Lamson, Chief Financial Officer</p>	<p>36 <b>Ingo Payments</b> Uncertainty in Inbound Funding in 2024 and How to Navigate It Drew Edwards, CEO</p>	<p>58 <b>Rewards Network</b> Embedding Data Into Operations Increases Agility James Roedding, Chief Product Officer</p>	<p>78 <b>Versatile Credit</b> Adapting to Change: How Technology Shapes the Future of Consumer Finance Ed O'Donnell, CEO</p>
<p>20 <b>Fiserv</b> Data as Our Most Powerful Ally Jeff Pomeroy, SVP and Head of Omncommerce, Carat from Fiserv</p>	<p>40 <b>Intellicheck</b> Next-Gen Fraud Strategies Use Data to Onboard Customers Safely Bryan Lewis, CEO</p>	<p>62 <b>Sovos</b> Technology Can Turn Tax Compliance Into Growth Engine Kevin Akeroyd, CEO</p>	
<p>24 <b>Franklin Madison</b> Expect to See Data Models Used in All Aspects of Business Robert Dudacek, CEO</p>	<p>46 <b>Kount</b> Understanding Your Customers Is More Important Than Ever Before Dilip Singh, VP, Data Science and Decision Analytics, Digital Solutions at Equifax</p>	<p>66 <b>Speedly</b> More Payments Friction Coming for Customers Joe Meuse, VP, Product</p>	

# Payments Execs View

**Data** as the  
Compass for  
Navigating  
Uncertain Times



**“The only thing we can count on is uncertainty,” Albert Einstein once observed.**

And while the statement is universal, and applies to pretty much any endeavor in life, uncertainty is an ongoing hallmark in business — especially in the payments realm.

The past four years are proof positive. A pandemic sent us all home, sent us all online and forced merchants and financial services providers to rethink their digital footprints, or establish them in a hurry. The stressors to the supply chains stretching around the globe might have been scarcely imagined, until they were real, front and center.

And now, with the pandemic behind us, uncertainty still reigns, though the issues confronting business leaders are different than the ones noted above. Inflation is stubbornly entrenched. We’re running at about 3+%, as of this writing, below the 9% peak notched a few years ago.

But even at these levels, and rate cuts seemingly an if rather than when from the Fed, planning is as tough as ever. Input costs are higher, consumer spending looks vulnerable and volatile. The ultimate casualties might be corporate top line momentum and margins. Consumer card delinquencies are on the rise, signaling stress in the paycheck-to-paycheck economy.

For banks and FinTechs, there's the added wild card of regulatory uncertainty. The Consumer Financial Protection Bureau has sought to cap interchange and late fees for credit cards, which might eat into revenue streams. FinTechs are coming under greater scrutiny in terms of risks and vulnerabilities when it comes to how they handle customer information.

Artificial intelligence may have been a buzz “concept” only a few years ago — but now it's promising to shake up all manner of businesses, large and small. It can be thought of as tool for competitive advantage — and also a tool with which fraudsters can prey on unwitting victims.

### **Gathering Insights and Crafting Strategies**

None of this is to suggest that executives must fly blind, so to speak, and simply be reactive to changes in the competitive, regulatory and global landscapes.

All corporate actions, interactions, engagements, strategies and transactions yield data. And the right technologies will leverage that data, collecting raw information, spinning it into something more than a set of metrics.

Data, as 18 executives told us, is what gives insight, in real time, to what's working ... and what's not. Data helps pinpoint where fraud's forming ... uncovering anomalous transactions before new attacks become successful.

Data can help payment service providers route payments across borders, time zones and currencies in the most streamlined (and cost effective) manner. Information delivered in real time can and will help financial institutions and FinTechs embrace faster payments, and deliver innovations more quickly, fine-tuned to their end market expectations.

The executives who offer up their advice and observations in the subsequent pages of this eBook noted that data models are likely to be pervasive across organizations, used to segment and examine their existing customers' changing tastes

and where new customers — and markets — might be considered for future growth.

Insight is part of strategy, they noted, and strategy recognizes both opportunities and challenges — and transforms challenges into opportunity.

# ERA OF AI UNCERTAINTY CALLS FOR TRACEABLE, RELIABLE ANCHORS OF DATA

---

**A**s technology executives, we are living in one of the most unique and volatile times in history, with the risk warning bells and threat vectors coming at us from all angles. From geopolitical, monetary and inflationary risks now colliding with technology risks associated with rapidly advancing artificial intelligence (AI)/generative AI platforms, the business ocean feels like a Dixie cup of water being churned with Category 5 hurricane force winds. Thus, the pressure on every decision made could not be greater — and the impacts on your core business more significant.

SHAUNT  
**SARKISSIAN**  
CEO



Many times, however, the past can also be prologue — and even more predictably, humans are creatures of habit. We go with what has always worked: the models and analytical tools we have relied on to help navigate times such as these provide the confidence needed to execute. From capital forecasts, fraud management tools and other “predictive” data models we have often relied on the data they provide to drive key insight and trusted decision-making processes.

But in the era of generative AI and rapidly advancing use of AI platforms/services, how can you actually trust the data you see? From calculations and forecasts to content, increasing use of AI/Generative AI and algorithmic “non human derived” data outputs can create havoc and uncertainty.

What platforms do you trust? What models do you trust? And what data/content is AI-produced vs. human/organic? These are now the most important questions to answer. And understanding the answers and their implications can make (or break) your business, and its future viability.

At AI-ID, we knew this was critical and from day one have had one mantra as part of our vision: “Truth at the Source.” This means that only when a data output (content, files, data, etc.) is created can it be property and tracked to its source. From images/content, text files or basically any data outputs an AI/generative AI platform can create unique protocols and metadata can manage all of these outputs and their lifecycle and utilization. And effective registration models are

used to manage and authenticate the data. Our AI-ID platform, unique AIGX files and AI Registry platform are focused on this every day.

To make an effective decision, you need to know your data is accurate. This includes knowing and tracking it to its source. Trusted data means trusted decisions. Ensuring a trusted AI platform built the data and knowing with certainty, provides the confidence needed to execute in an increasingly risk-entrenched market.

At least for now, we, as leaders of businesses and decision-makers, have not fully ceded the executive mantle to our AI overlord masters. So every executive decision matters. To quote Peter Drucker, “Whenever you see a successful business, someone once made a courageous decision.” Just make sure that the data you use and its source is trusted. And if so, that courageous decision and successful business, will more than likely be yours.



MICHAEL  
**BUDDE**  
COO and CFO



# NAVIGATING UNCERTAINTY: THE POWER OF DATA IN BUSINESS DECISION-MAKING

---

**A**s we embark on the second quarter of 2024, businesses face a sea of uncertainties. From shifting spending patterns and interest rate environments to the evolving role of artificial intelligence (AI) in business operations, the landscape is complex and ever-changing. Amid these uncertainties, one thing remains clear: better choices are made with better data.

### Uncertainty: Consumer and Business Spending in 2024

Consumer spending rose in February 2024, the most substantial increase in a year. This surge indicates the resilience of the economy, a sentiment echoed by Fed Chair Jerome Powell. However, much of this spending is fueled by savings rather than rising incomes. In this context, merchants and banks must focus on delivering compelling value propositions to better reward loyal customers and differentiate to win new consumers.

### Uncertainty: The Role of AI in Business

Banks and merchants are increasingly experimenting with AI to deliver business priorities. J.P. Morgan Chase recently shared in its shareholder letter that it has over 400 AI use cases in production, spanning marketing, fraud and risk. For any business, the efficacy of AI

use cases hinges on a foundation of rich, accurate data. Businesses investing in both AI and high-fidelity data access will be the ones to uncover valuable marketplace and customer insights, and enjoy a competitive advantage.

### Navigating Uncertainty

Data and technology must enable timely and relevant reactions to marketplace conditions. Here are three key enablers core to how we serve our platform partners at Banyan:

## 01

**Clarity:** Banyan’s platform fosters collaboration between merchants and financial institutions, amalgamating diverse customer spending datasets. This brings a clearer understanding of purchase

behavior at the receipt level and sales revenue attribution at the product or brand level. When a consumer checks out at the local grocery, that consumer is making one decision that is the culmination of many item-level decisions which bring insights to the merchant, the bank and the consumer in a way that promotes a more personalized experience.

## 02

**Versatility:** A single data connection to Banyan can power multiple use cases across many partners, enabling easy scale up or down based on shifting marketplace signals and business priorities. That means increased speed and optionality to power

a wide variety of solutions ranging from fraud mitigation to enhanced card-linked offers to loyalty rewards engagement and beyond.

## 03

**Simplicity:** Build once for further low-effort scalability. As a trusted data integration partner, Banyan’s platform does the hard work to power any receipt data use case — whether it’s known today or yet to be identified tomorrow. A single data connection allows your business and technology resources to focus on core growth initiatives instead of being committed to maintenance and building more integrations to power new solutions.



# QUALITY DATA, TECHNOLOGY PAVE THE WAY FOR IMPROVED B2B PAYMENTS

MARIANA  
**LAMSON**  
Chief Financial Officer



**T**he major uncertainty faced by B2B business is the lack of a clear answer to the question, “How is the economy really performing?” While there is a plethora of data available on B2C and macroeconomic factors, B2B data remains harder to find and is often fragmented. This poses a challenge in understanding the full landscape of risks and opportunities.

The good news is that, while uncertainty is in the future, we have the ability to know and understand the past. Harnessing the power of technology to gather, organize and present data in a way that is actionable for our clients and partners is paramount, which is why data integrity is the cornerstone of our approach at Boost. Our patented straight-through-processing (STP) technology automates manual processes, removing the risk of human error, which can have significant repercussions up and down the data stream. This not only saves time and resources but also instills confidence in the reliability of the data being utilized.

Once you feel confident in the quality of the data, then you need the experience to interpret and apply the information. Identifying the potential risks and being prepared with realistic scenario planning allows you to pivot when faced with changes in the environment. One of the biggest pitfalls we see is looking at data over a limited time series. A best practice is to ensure you have a long history of data to help perform effective regression analysis and identify trends. You also need a team that has the experience to handle this complex environment. Our diverse and talented workforce brings a wealth of knowledge and expertise to the table, allowing us to tackle complex challenges and adapt to changing dynamics.

The best laid plans are only as effective as the tools you have to implement them. This is where technology comes into play — are your systems flexible enough to make quick changes if required? When we think about the realm of B2B payment solutions, conventional methods are often criticized for their rigidity and complexity. Recognizing this challenge, we introduced Dynamic Boost, a payment platform designed to facilitate the seamless implementation of dynamic rules for transaction processing and pricing, enabling businesses to adapt contract terms and implement controls during times of evolving needs.

To successfully address uncertainty, it is not just about the tools but also the mindset. Being nimble, proactive and adaptable is crucial in a landscape where change is the only constant. It's important to recognize that there is a difference between uncertainty and instability. Uncertainty is not inherently bad; in fact, it is often an opportunity for innovation. Two of our core values at Boost are “Be Bold” and “Blaze the Trail.” These values are not just words on paper; they shape how we operate on a daily basis. While uncertainty may prevail, stability can still be achieved through sound strategies and agile operations. By fostering a culture of innovation, adaptability and excellence, we empower ourselves and our clients to thrive in the face of change.



JEFF  
**POMEROY**

SVP and  
Head of Omncommerce,  
Carat from Fiserv

Carat<sub>from</sub> fiserv.

# DATA AS OUR MOST POWERFUL ALLY

---

In the face of uncertainties, data is emerging as a business's most powerful ally. Organizations that treat data as more than just a collection of numbers and consider it a strategic driver are equipped to move quickly and efficiently, unlocking new business capabilities and driving meaningful innovation for their customers.

A core part of our Carat strategy at Fiserv is to develop solutions that make it simple for businesses to view and understand the payments data flowing through their business so they can strategically build for the future. Through cloud-agnostic solutions, businesses can seamlessly connect their payments data to supplier, customer loyalty, workforce and other data sets to create new insights. Here are a few data-driven trends we see transforming payments innovation in the future.

## Data Sharing Between Merchants and Issuers

Merchants and issuers each hold valuable pieces of payments intelligence. By making it easier for these entities to share data across their ecosystems, both parties can make better decisions that help fuel growth, reduce risk and power innovation. Central to this strategy is enabling seamless, real-time data exchanges. By empowering more businesses with robust merchant and issuer intel, payment providers can better combat fraud and reduce operational costs through real-time risk monitoring and dispute management that leverage the best data our industry has to offer.

## Leveraging Conversational AI

The adoption of conversational artificial intelligence (AI) in data analysis is a significant advancement from traditional methods, which often require specialized training and expertise. By offering intuitive interfaces and user-friendly interactions,

conversational AI democratizes the ability to query data, empowering users across all levels of an organization to make data-driven decisions without being hindered by technical barriers.

As it relates to payments, conversational AI can facilitate real-time data exploration and visualization, allowing businesses to almost instantly query data to gain a deeper understanding of trends, patterns, and anomalies within data sets. Whether it's sales performance metrics, customer behavior patterns, or market trends, businesses can use AI to obtain insights on the fly, enabling agile and responsive decision-making in dynamic business environments.

## Insights Outside of Payments Data

By leveraging a diverse range of data sources, businesses can augment existing payments datasets to create more comprehensive insights. A few simple examples of this may include:

- **Aggregating payments data** within similar categories and verticals allows businesses to understand their market position and identify opportunities for growth. Whether it's assessing market share trends, evaluating customer loyalty or optimizing strategies, share-of-wallet insights facilitate more informed decision-making.
- **Performance benchmarks:** By analyzing metrics such as transaction times, success rates, and processing costs against broader datasets, businesses can identify areas for improvement and benchmark their performance against industry standards.
- **Out-of-store customer behavior** Understanding where shoppers are engaging

before and after a purchase delivers greater insights into shopper behavior and can inform broader marketing and customer journey strategies. With these insights, merchants can determine the best way to reach their customers and identify adjacent products and services that could become part of their offerings.

In many ways, data powers innovation. Whether it's real-time cloud sharing to accelerate funding cycles, fueling risk models or augmenting customer and loyalty data with payments behaviors, businesses have more opportunity than ever to unlock value through insight.



ROBERT  
**DUDACEK**  
CEO



# EXPECT TO SEE DATA MODELS USED IN ALL ASPECTS OF BUSINESS

**C**onfidently knowing where we're going helps us navigate the unexpected. In times of uncertainty, we lean on data modeling as our compass. It's the tool we use to inform major areas of our business and marketing strategy.

Wrapping up the first quarter of 2024, some of last year's challenges still linger. Inflation continues to put pressure on print, postage and freight costs. Other areas of concern are interest rates, consumer behavior and a potential recession.

Even when the market fluctuates, data modeling remains our trusted guide. Utilizing our data team is integral to ensuring the success of each insurance marketing campaign we deliver. Our data scientists meticulously analyze campaign performance, refine strategies and optimize outcomes to create predictability out of the uncertainty.

Here's what this looks like when serving our clients:

- **Identify a responsive population.** When partnering with a new client, it takes roughly 90 days to mature a direct mail campaign. This requires analyzing a client's files and building profiles of "most likely" customers

(overlaid with more than 1,500 attributes that include demographics, economic status, prior purchase history and more). Then, we create an algorithm based on these attributes.

- **Use the data to target and refine.** When we apply an algorithm to a client's campaign, it targets consumers expected to respond, reducing risk and creating predictability for the client. Consumer data is ranked by pentile, with the most responsive at the top and the least at the bottom. A campaign is then sent to the desired group, and the data model is judged by how it performs.

What's most fascinating about this process is how data modeling is used up-to-the-minute. Data models are adaptive. When current events take place, consumer data changes — and the models do, too.

This ability to adjust and improve models, even day to day, allows us to offer our clients sharper insights. We're not guessing. We're continuously examining market data to predict and drive each campaign.

Of course, predictive models are only as good as the data that goes into them. For our data team, past performance of predictions serves as a litmus test for the reliability of future forecasts. Our data scientists study historical patterns so they can ask the right questions.

Our reliance on data also extends beyond campaign execution. We use the insights gleaned from our data team to anticipate market trends, forecast consumer preferences and determine new insurance product offerings.



# TECHNOLOGY AND STRATEGY CAN UNLOCK DATA INSIGHTS

---

**F**inancial services account for 25% — or \$1 for every \$4 — spent in technology today, making it the biggest revenue pool on the planet. This immense market is full of risks but also big opportunities for banks, FinTechs and brands, and there will always be endless uncertainties to navigate.

DEREK  
**WHITE**  
CEO





And at the center of this opportunity is the customer. We help all types of financial providers use technology to unlock critical insights hidden in their own customer data so they can identify and mitigate risks before they gain momentum and seize opportunities that transform financial services for businesses and their customers.

Achieving this kind of clarity from data insights is no small feat — particularly for organizations that are locked in data silos and legacy systems. The key to overcoming this challenge is using technology to implement the five C's of data: Capture, Clean, Cache, Call and Connect.

## 01

**Capture:** Collecting data from various sources, including internal systems and customer interactions, provides a rich dataset for analysis.

## 02

**Clean:** Refining raw data by removing inaccuracies and irrelevant information ensures it is accurate and ready for analysis.

## 03

**Cache:** Storing data strategically reduces retrieval times and resources, making information promptly and efficiently accessible for decision-making.

## 04

**Call:** Using APIs for dynamic data access across systems integrates diverse data sets in real time.

## 05

**Connect:** Integrating various data sources in user-friendly ways creates a seamless flow of

information across an organization, offering a comprehensive view that drives strategic decisions.

For businesses, financial institutions and FinTechs looking to reduce risk and capture opportunity in uncertain times, the advice is clear: use technology and smart strategies to get the most from your data. Break down the silos, invest in cleaning and intelligently caching your data, ensure it can be easily called upon and most importantly, use the insights to deliver outstanding services and customer experiences.



# CUSTOMER DATA, TECHNOLOGY **KEYS TO OPTIMIZING PROFITABILITY AND MANAGING RISK** AMID UNCERTAINTY

**T**he direction of the United States and world economies is uncertain and geopolitical risks seem to be growing. What are financial institutions to do when facing such uncertainty? There are strategies that can be applied to help organizations not only survive such times but excel.

## **Background**

The U.S. economy defied recession fears and achieved a soft landing in 2023 and throughout the first quarter of 2024. Inflation shows signs of coming under control due to the Fed's restrictive activities. The surprise has been stronger than expected GDP growth. The forecast for the remainder

JOHN  
**BRESNAHAN**  
Global Head of Operations



of 2024 looks stronger than recently anticipated. The Fed will be challenged to get the timing right for lowering rates and must consider the risks of lowering too soon or too much against the risks of waiting too late or lowering too little.

Geopolitical risks remain a threat to global supply chains, which creates greater uncertainty about the future path of inflation as firms work to diversify their supply chains. Despite these headwinds, organizations can and do achieve growth in revenue and profitability during such times.

### Core Strategies

The following core strategies help organizations grow even during periods of high uncertainty:

- **Assess which stage you are in and focus accordingly:** Start Up, Ramp Up or Momentum. Each stage requires a different focus and set of tactics. For example, during the “Start Up” phase,

you focus on customer acquisition versus during the “Ramp Up,” when you may focus on growth and profitability, or “Momentum,” when you may need to focus on customer retention and engagement. Aligning your focus with the most critical activities, given your organization’s stage in its lifecycle, is crucial.

- **Segment existing customers and mine customer behavioral data.** Winning organizations drive deep insights into customer behavior, allowing for a holistic view of customer needs. Companies should define which behaviors are profitable or unprofitable and then implement strategies to migrate unprofitable customer behaviors to profitable ones.
- **Focus on niche market segments** and personalization to grow your business. Customers today expect

seamless, personalized, and convenient experiences. Organizations that want to remain competitive must continuously adapt to customers’ evolving expectations and develop personalized offerings that resonate with their target market.

### Additional Strategies

In addition to leveraging customer and market data, leading organizations use advanced technologies to deliver digital user experiences, manage risks, and improve operations. Organizations do not have to do this independently but can choose partners with innovative technical capabilities. For example, at i2c we use machine learning, artificial intelligence (AI) and natural language processing (NLP) to ensure our clients realize the benefits these technologies offer, including:

- **Fraud detection:** Machine learning, predictive analytics and AI-powered fraud

detection are used to assess data in real time, identify suspicious activities and protect against fraud.

- **Compliance:** Advanced technologies such as NLP are employed to automate compliance checks and ensure that clients meet regulatory requirements, reducing compliance risks.
- **Operational efficiency and quality:** Processes are streamlined, and routine tasks are automated to enhance operational efficiency, reduce the risk of errors and failures and improve quality.

### Summary

During uncertain times, companies can employ effective strategies, either on their own or through partnerships, that leverage customer data and utilize technologies to prosper.

# UNCERTAINTY IN INBOUND FUNDING IN 2024 AND HOW TO NAVIGATE IT

**N**avigating the uncertainties surrounding inbound funding sources from financial institutions, wallets and FinTechs has become a top priority for businesses as we round the corner into the second quarter of 2024. With the emergence and quick growth of neobanks and non-traditional financial institutions, there is an increasing emphasis on ensuring secure money movement into accounts, accompanied by a new level of uncertainty regarding the reliability of funds moved into accounts.

DREW  
EDWARDS  
CEO



## Challenges in Inbound Funding Money

Funding an account through various channels — such as ACH, checks and card-based transactions — carries an inherent risk of fraud and potential losses for financial institutions. While it may look like funds have been received and are “good,” many players are learning the hard lesson that even honest consumers often have 90 days or more to claw back funds that may have already been moved or spent.

The presence of truly bad actors seeking to fraudulently fund accounts exacerbates these risks, creating an environment of uncertainty that threatens the growth, stability and even viability of these emerging financial entities. The transactional costs associated with inbound funding can be dwarfed by the true cost inclusive of bad debt.

## The Need for Real Solutions

In all this uncertainty, luckily, there are solutions that can be leveraged effectively which include risk management and, in some cases, good funds guarantees. Robust payment partners equipped with extensive historical data on fraudulent activities, nationwide footprints and advanced technologies like machine learning and artificial intelligence (AI) offer an inroad to stability for these financial institutions. By identifying patterns, detecting anomalies, and preemptively identifying fraudulent behavior, these partners play a crucial role in minimizing the risks associated with inbound funding.

## Embracing Strategic Partnerships

Collaborating with risk management partners that have long track records at managing risk is and will become even more imperative for companies looking to safeguard their inbound funding transactions. The need for robust risk management solutions with a history of excellence will only intensify, making strategic partnerships with reliable payment partners indispensable for navigating the complexities of the modern financial landscape.





BRYAN  
LEWIS  
CEO



# NEXT-GEN FRAUD STRATEGIES

## USE DATA TO ONBOARD CUSTOMERS SAFELY

---

**D**ata breaches and mail theft have resulted in a record level of available compromised identity information, payment information, login information and even stolen checks. It has been said that “At this point, all of our information is out on the dark web and it’s now just a matter of when it is going to be used against us.”

Combined with inadequate fraud strategies, fraudsters have the key to the castle; it's a perfect scenario of having the answers to the quiz ahead of time.

Let's talk about how it's done:

- Identity theft and identity impersonation: The onslaught started in 2017 with 147MM records breached and has multiplied every year since then. Last year, there were over 3,200 separate data breaches that resulted in over 353 million records being released on the dark web.
- Rapid increases in mail theft provide more compromised information as well as valid documents that are used for identity theft and check fraud.
- This breached data is shared online, where a criminal can purchase a complete identity that includes name, address, Social Security number, DOB, credit score and current open

account information for less than \$30 per identity. (The amount of data now available online is abundant.)

- Armed with this trove of real data they purchase a fake ID from overseas for less than \$100. These IDs have their picture on it with the PII data of their victim and pass the traditional ID verification checks which allows them to assume and impersonate the identity of the victim they targeted. These high-quality fakes even fool law enforcement.

From there, they can:

- Open new accounts: By impersonating a victim with no previous instances of fraud having been reported through the traditional credit agencies they are able to open multiple accounts within a 30-day period before the victim or issuing lender is ever alerted.

- Account takeover attacks: ATO attacks increased 354% year over year in 2023. Fraudsters know this is the easier path since no credit pulls are needed and knowledge-based answers are what is often deployed to verify account information. Contact and call centers are often used to explore the defenses in place and then social media is leveraged to gain additional information needed for successful ATO attempts.

**What are some of the inadequate fraud strategies still being used?**

- Confirming the exact same data sources that the criminals use — which is the valid personal identifiable information that they have purchased through the dark web. Fraudsters are highly effective at gathering accurate information and using it to impersonate their targets. We

must go beyond confirming the same data.

- Depending on ID verification tools that are highly susceptible to false positives and false negatives due to templating models that rely on image quality and OCR processing. Fraudsters bypass ID Verification processes by submitting low-quality images which forces manual reviews that now rely on the human eye — and that is never good.

**How does Intelligencecheck implement next-gen fraud strategies?**

- By using authoritative data sources to verify the validity and ownership of the presented document. This includes verification of the hidden encoded security features that are not public knowledge versus templating models that are widely available online.

- Implementing passive datasets that empower platforms to move beyond submitted personal identifiable information:

Proxy detection: What is the IP address they are coming in from if online?

Geo location: where is the transaction really taking place?

Device fingerprinting: how many times has this device been seen?

- Behavioral analytics: Behavioral models comprise all available datasets and serve to shed a true light on the situation beyond traditional data checks.
- And finally, building data consortiums:

Coming together to build a network of trust and certainty by sharing passive and transactional data.

Better understanding the tools that fraudsters use, which now includes artificial intelligence (AI) and data sharing. They are well coordinated, and we must be as well to win the war.

**What are the benefits of implementing these next-gen fraud strategies?**

- You shatter the traditional glass ceiling put in place with previous outdated fraud strategies.
- You stop the bad guys in their tracks by not continuing to use the strategies that they have depended on to be successful.

- We take the answer book away from them by instead using authoritative and passive datasets.
- You create strategies designed for customers, not fraudsters. This creates lower-friction processes that do not make your real customers feel like criminals.
- This leads to lower abandonment and Increased conversion rates – customers are no longer frustrated by your KYC processes.
- We help our customers achieve on average a 20% increase in new account openings while mitigating fraud losses to less than 1% on those new account openings.
- You protect your customer base which creates more customer loyalty.
- Stopping the bad guys from creating a devastating path of destruction with your customers. Customers who are victims of identity theft face heavy financial losses but also endless hours of time and energy trying to dispute and repair.
- At the end of the day, everyone has a budget in place for acceptable fraud losses — but no has a limit in place for the number of new customers they want to acquire.



**DILIP  
SINGH**

**VP, Data Science and  
Decision Analytics,  
Digital Solutions at Equifax**



# UNDERSTANDING YOUR CUSTOMERS IS MORE IMPORTANT THAN EVER BEFORE

**R**evenue growth is a top priority for most businesses. There are various ways to bring in more money — but not all strategies are safe or stable. And unfortunately, attempts to balance risk with reward are often incomplete.



For example, it's common practice for businesses to try to broaden their sphere of influence and reach new audiences. Other businesses want to drive more value from the customers they already have.

Both of those techniques have proven to be effective in the past. And they can still be effective today — if you have the right KPIs in place. In this day and age, the focus needs to be on quality instead of quantity. You want more revenue — from good customers.

Prioritizing volume alone can cause uncertainty, unexpected risk, and negative ROI. But with data, you can better understand the potential impact — good or bad — each individual could have on your business.

Fortunately, because of the digital world we live in, there is an abundance of data available for analysis. Unfortunately, accessing

that data can be challenging. Businesses often spend a lot of money on third-party data that ends up being inaccurate and irrelevant.

In response, Kount, a trust and safety company, developed a fully compliant consumer insights solution that empowers you to draw accurate conclusions about the individuals interacting with your brand. Without revealing consumer PII or any merchant data, we can help you gain insights from the data you already have.

Examples of insights provided include:

- Economic cohort
- Propensity to spend
- Shopping frequency
- Geographical location
- Chargeback activity

The robust data enables dozens of different use cases. Ultimately, because Kount has combined multiple capabilities into a single technology platform, fraud detection software — and its data analysis capabilities — becomes a revenue-generating engine rather than a cost center.

For example, your own data can tell you when a customer files a chargeback. Consumer insights can tell you the odds of it happening again. Maybe the chargeback at your business was a one-time occurrence because of a mistake on your part, and the shopper should be given a second chance. Or maybe that customer disputes purchases more often than not and should be banned permanently.

Another example is qualifying leads. Your own data can tell you when a new lead comes into your sales funnel. Consumer insights can tell you whether or not the lead is a good fit for your business. Does the prospect seem risky or safe? Is the contact information real? Does the individual match your target buyer? Then, you can decide if there is value in continuing your marketing efforts or if you should move on to the next target.

As margins shrink and economic woes mount, it's important to remember a fundamental business truth: not everyone is an ideal customer. It can be tempting to take more risks in an effort to bring in more revenue. Instead, use data to validate the quality of interactions so you can safely and confidently grow your business.



MACIEJ  
**PITUCHA**

VP of Product and Data

**mangopay**

# MITIGATE UNCERTAINTY

## WITH AI AND REAL-WORLD UNDERSTANDING

---

In terms of geopolitical factors, we know that inflation and unemployment directly contribute to an increase in fraud attacks, with people growing increasingly desperate and trying to game the system.

This might not necessarily involve trying to steal money or credit card details, but it can be activity like consumers falsely claiming that a clothing order didn't arrive or that a food delivery didn't turn up, so they can enjoy a free meal. Put simply, increased inflation means more unemployment and results in more fraud attempts from specific locations.

The most effective way to safeguard against these risks is to monitor current baseline metrics and look out for spikes and anomalies — things like how many new users there are, transaction volume and payment methods used in a specific region or during a specific period. These anomalies are yellow flags that prompt us to take a closer look. Is the increase of any activity related to fraud attacks?

For example, we're able to monitor the average transaction volume or number of new users on a platform and if there's a spike, we investigate further. We carry out validation to see if there are any promotions or other causes but if not, then again it's a yellow flag and we start investigating.

We leverage in-house technology to conduct macro anomaly detection. It's a combination of artificial intelligence (AI) and our team working together on a daily basis. Machine learning takes historical data to help us establish the alerts and our expert data team is then able to investigate deeper.

For example, we know the typical percentage of users in France using a foreign credit card on a given platform. If this jumps to a

much higher percentage, then we know something is off. Thousands of combinations of factors can be used to create alerts.

If you combine that real-world knowledge, considering the current geopolitical climate with AI and machine learning, you build a robust way of protecting your business from risk and mapping out a more secure future.





DOUG  
**BROWN**

Chief Product Officer,  
Digital Banking

**NCR VOYIX**

# NAVIGATING UNCERTAINTY: EMPOWERING SMALL BUSINESS WITH TOOLS AND SUPPORT

---

**E**very business, large or small, will find itself navigating the ebbs and flows of economic uncertainty. The unpredictable nature of markets, coupled with external factors beyond their control, pose significant challenges to their financial stability. For small business owners, this is especially true. While uncertainties are inevitable, having a firm grasp of their finances can mitigate the impact and empower business owners to weather the storms more effectively.



Unlike larger enterprises with dedicated accounting departments, many small business owners lack the luxury of having an accountant on staff or even readily available access to one. Consequently, they must rely on various disparate financial tools to manage their money efficiently. Platforms like QuickBooks and others provide valuable assistance, yet there remains untapped potential for banks and credit unions to offer more comprehensive support.

Financial institutions have a unique opportunity to bolster the resilience of small businesses by providing tailored financial tools and support. Beyond basic banking services, banks and credit unions can offer advanced functionalities such as cash flow management, payroll capabilities, expense tracking and more. By integrating these features into their services, banking providers can empower small business owners to streamline their financial operations and make more informed decisions.

Furthermore, financial institutions can leverage the data gathered from these tools and other macro indicators to identify emerging trends and proactively reach out to business owners. By analyzing transactional data and cash flow patterns, banks can anticipate potential challenges and offer timely assistance. Whether it's extending lines of credit during lean periods or providing tailored financial advice, proactive outreach demonstrates a commitment to supporting small businesses through various economic situations.

However, to truly empower small business users, financial institutions must go beyond providing a handful of tools to rather prioritize education and personalized support. Hosting financial literacy workshops, offering consultations and providing other resources for financial management and planning

can equip business owners with the knowledge and skills needed to navigate these uncertainties. By fostering a culture of learning and support, banks and credit unions can foster stronger relationships with small businesses.

In today's competitive and evolving landscape of banking and financial services, institutions that prioritize small businesses will undoubtedly gain a competitive edge. By offering a comprehensive suite of tools, personalized assistance and educational resources, banks and credit unions can position themselves as trusted partners. Moreover, by demonstrating a genuine commitment to helping small businesses thrive, they can cement themselves as the trusted banking provider in the communities they serve.



JAMES  
**ROEDDING**  
Chief Product Officer

rewards  
network<sup>SM</sup>

# EMBEDDING DATA INTO OPERATIONS INCREASES AGILITY

**T**he executive team at Rewards Network believes that the best thing we can do to prepare for uncertainty and risk is to grow and strengthen our core operations. The more margin and agility our business builds into our operations, the more likely we will be able to weather any storm. Our predominant use of technology, data and analytics is in service of helping improve our core operations and customer experience.

Rewards Network relies on both traditional business intelligence to guide decision-making as well as artificial intelligence (AI) to automate and augment workflows. Analytical expertise and technical skills enable us to quickly respond to changes in our customers, the market and the overall economy. Examples of this range from machine learning credit models, which performed exceptionally well during the “stress test” that COVID-19 presented, to neural networks that find patterns in data. Combining technology and data science adds more intelligence to robotic process automation flows, allowing our team to focus on higher-value work that benefits from human intelligence. Rewards Network’s AI models find patterns at a scale beyond human capacity,

delivering higher quality decisions and more consistent output. This expands and improves customer service.

Investment and reliance on data science and AI was critical to our success during COVID-19 and has driven growth since. As part of managing that crisis, we built several data-driven tools that track both risks to and opportunities for our business. One of these tracks the impact macro trends have on our broad restaurant customer base. Our Same-Store-Sales engine allows us to track daily trends in opening hours, foot traffic and average ticket prices, which are the key drivers of total restaurant sales. Our extensive data set and historical perspective allow us to control for seasonality and provide a comprehensive view of how

consumers are behaving across different restaurant segments and geographies. This engine was critical to understanding trends and momentum during COVID-19 and enabled us to predict the impact on our business during winter months and as markets reopened. It continues to play a vital role in our success as we track consumer response to market weakness, debt exposure and other economic drivers — translating this into expected spend across our restaurants.

The second investment area was enhancing our customer feedback loop to inform our product, marketing and distribution strategies. The aggregation and analysis of our customer satisfaction surveys, engagement levels with our platform, and

granular tracking of our service touch points and triggers for customer service provide a single view of trends. These insights, both at a summary and detailed level, are critical to keeping a close pulse on customers — providing the earliest indicators of risks and opportunities.

These investments in technology, data science and analytics facilitate regular reviews of macro and customer trends, driving better strategic decisions.



KEVIN  
**AKERROYD**  
CEO  
**SOVOS**

# TECHNOLOGY CAN TURN TAX COMPLIANCE INTO GROWTH ENGINE

---

**D**uring my career, I've had the opportunity to manage businesses through a number of difficult and challenging periods. These ranged from tough and competitive markets to talent shortages to global economic slowdowns. The common theme that emerged in every one of these situations was the importance of surrounding myself with a talented team, aligning that team with a single "north star" and communicating transparently and frequently with all critical communities — employees, customers and investors.



Businesses and markets are cyclical, and practice builds muscle during the ups to mitigate the impact of the downs. Assessing your own operation should never stop. Self-scouting and the ability to identify and address weaknesses before a crisis or downturn hits is what provides the strength and resolve to get through it.

The compliance industry is not immune from uncertainty. Globally, there are more than 14,000 regulatory changes monthly covering over 19,000 tax jurisdictions, meaning compliance changes can be sudden, relentless and consequential. In 2024, we are witnessing more of the same, as tax authorities have either already announced new mandates and guidelines or are actively planning for them.

Because of this, three of the biggest challenges facing companies right now are risk, cost and lack of insights. Each of them can be addressed with the right technology and data.

The risks posed by not meeting compliance obligations can range from a disruptive, time and resource-intensive audit to financial penalties and even criminal proceedings. But, in the pursuit of meeting rapidly changing tax rates and regulations, many businesses have responded to each change by investing in a patchwork of hardware and software that doesn't scale, may be quickly outdated and puts a drain on resources.

At the same time, the pace of regulatory changes will continue to accelerate, with more governments

gaining access to companies' transactional data in real time. This leaves many in a position of having less insight into their data than the government — and even worse, unable to use predictive insights to spot transaction anomalies, errors and outliers in that data.

Companies have a critical need for technology that allows them to orchestrate, manage and analyze their tax obligations. Just as enterprise resource planning (ERP), customer relationship management (CRM) and human capital management (HCM) have all become holistic, cloud-based platform solutions that unlock tremendous business value, the need is there for a unified platform solution, and that is what we're focused on delivering.

Like many industries, the advances in generative artificial intelligence (GenAI) also present tremendous opportunities for compliance management. AI will enhance our ability to anticipate regulatory changes based on past behaviors and future indicators. Then, we will be able to help companies begin preparing for changes before they are ever announced.

In addition to AI, cloud-native software, intelligent automation and API integrations with existing enterprise financial systems all contribute to an insights-rich finance function, one that transforms compliance from a business requirement into a force for growth.



JOE  
**MEUSE**  
VP, Product



# MORE PAYMENTS FRICTION COMING FOR CUSTOMERS

**A**

s we near the end of the first quarter of 2024, business leaders find themselves facing a host of uncertainties that could impact their bottom line.

The **recent agreement** between Visa, Mastercard and U.S. merchants underscores the significant impact that regulatory changes can have on businesses, particularly those reliant on credit card transactions. With costs continuing to rise, merchants may be forced to re-evaluate their pricing strategy and consider whether a surcharge program, passing additional costs onto consumers, will be right for their business.

This shift in payment dynamics has the potential to reshape consumer behavior and preferences further, posing both challenges and opportunities for businesses across industries.

Consider the scenario where every restaurant or gas station begins to impose a surcharge of 2 percent to 2 1/2 percent on credit card transactions. Such a change will prompt consumers to reassess

the convenience and affordability of using their cards. This leads to shifts in spending habits and patronage. For merchants, adapting to these changes may require strategic adjustments and leveraging technology to remain competitive in the marketplace.

While this shift is one recent example, organizations are increasingly evaluating their payments stack in an effort to lower cost and improve sales and the customer experience (retention). Uncertainty continues as markets shift, customer needs evolve and all players in payments continue to change the game.

Our vision of an open and secure payments ecosystem offers merchants the flexibility of choice and adaptation as they adjust to uncertainties. Orchestration offers merchants the flexibility to optimize transaction routes, adopt the right mix of PSPs and

tools and rapidly adapt to changing customer preferences. Payments orchestration also provides merchants critical insights to customer behavior and preferences. By harnessing the power of data-driven insights, businesses can identify emerging trends, detect anomalies and optimize payment strategies to maximize revenue and mitigate risks effectively.

In conclusion, as we approach the end of the first quarter of 2024, businesses are facing a multitude of uncertainties, particularly in the realm of payments. The recent Visa and Mastercard fee settlement serves as a stark reminder of the impact that regulatory changes can have on businesses and consumers alike.

By embracing payments orchestration, businesses can navigate uncertainties and capitalize on emerging opportunities.

# THE DATA REVOLUTION: CHANGING THE LANDSCAPE OF FINANCIAL TRANSACTIONS

---

**C**ontinued uncertainty in the market and our geopolitical landscape is one of the few things that we can be certain of. How businesses navigate turbulence and start to use it as a competitive advantage often comes down to effective interrogation and utilization of data.

The advent of data, data analytics and artificial intelligence (AI) has significantly transformed the card payments industry, reshaping how transactions are processed, enhancing security and improving customer experience. This transformation is not just evolutionary; it's revolutionary, as it leverages vast amounts of data to drive insights and decision-making, fundamentally changing the landscape of financial transactions.

## **Enhanced Fraud Detection and Security**

One of the most significant impacts of data analytics and AI on card payments is the advancement in fraud detection and security measures.

OLIVER  
**DEAN**  
Chief Administration Officer

**thredd**

Traditional fraud detection systems were rule-based and often reactive rather than proactive. Today, machine learning algorithms analyze transaction data in real time, identifying patterns and anomalies that indicate fraudulent activity. These systems learn from historical transaction data, becoming increasingly effective over time. By analyzing variables such as transaction size, location and frequency, AI-driven systems can identify suspicious activities with high accuracy, reducing false positives and minimizing fraud losses. Thredd recently launched its AI-powered Fraud Transaction Monitoring solution, which assesses and halts suspicious transactions in under 20ms and provides real-time notifications to the issuer. This state-of-the-art fraud monitoring solution has significantly decreased our clients' fraud losses.

### **Personalized Customer Experiences**

Data analytics allows card issuers and merchants to understand their customers' spending habits better, enabling them to offer personalized products, services, and rewards. By

analyzing transaction data, companies can identify customer preferences and behaviors, tailoring offers and communications to meet individual needs. This personalization enhances customer satisfaction and loyalty, as consumers receive offers that are relevant and valuable to them. Moreover, AI can automate customer service interactions, providing quick and accurate responses to inquiries and issues, further improving the customer experience.

### **Operational Efficiency**

AI and data analytics also streamline operations in the card payments industry. AI algorithms can automate the approval process for transactions and credit applications, reducing processing times and operational costs. This efficiency not only benefits the companies by lowering overheads but also improves the customer experience with faster service. Additionally, predictive analytics can help in anticipating and managing demand, ensuring that systems are scalable and can handle peak transaction volumes without disruption.

At Thredd, we've deployed AI across our internal and external platforms, allowing our clients' developers to query our developer documentation more quickly and our associates to have access to AI-compiled meeting notes and summaries.

### **Risk Management and Compliance**

Regulatory compliance is a significant concern for the card payments industry, with stringent requirements around anti-money laundering (AML) and know-your-customer (KYC) protocols. Data analytics and AI play a crucial role in ensuring compliance by analyzing transaction patterns to detect potential regulatory violations. These technologies can automate the monitoring and reporting processes, making it easier for companies to comply with regulations while reducing the risk of costly fines and reputational damage.

### **Innovative Payment Solutions**

Finally, the use of data and AI is enabling the development of new and innovative payment solutions.

From contactless payments to biometric verification methods such as fingerprint and facial recognition, these technologies are making transactions faster, easier and more secure. AI-driven chatbots and virtual assistants can guide customers through the payment process, while blockchain technology offers new ways to secure and streamline transactions.

In conclusion, the opportunities for the integration of data are vast and in an age of uncertainty give payments businesses a solid foundation on which to flourish.

The continued integration of data analytics and AI in the card industry is transforming every aspect of how transactions are processed, secured and experienced. These technologies are not only improving operational efficiencies and customer experiences but also driving innovation, enabling the development of new payment methods and business models. As these technologies continue to evolve, they promise to further revolutionize the card payments industry, making transactions more seamless, secure and customer-centric.

# NAVIGATING BUSINESS UNCERTAINTY

## WITH RELIABLE OPEN BANKING DATA

**T**he economy is still feeling the aftermath of the pandemic, which completely disrupted the way we live and work. The outbreak of war in Europe and the Middle East also drives inflation, unease and uncertainty about the future. I don't recall any other time in my life when so much changed in such a short period of time. In the U.S., consumers changed their physical location, their shopping habits and their spending patterns, leaving businesses guessing who they're working with and what their customers may need. Against this new backdrop, the assumptions we worked off of five years ago seem nearly meaningless now.

ALEX  
**GONTHIER**

Founder and CEO

 **Trustly**

As the world shifted online at an accelerated rate, old payment habits have changed. For instance, most consumers are shifting from bill pay on their banks' sites/apps, which were the center of their financial lives, to paying directly on their billers' sites/apps. The advent of open banking is helping that shift of power even further toward consumers and the businesses they want to work with. Businesses can now establish a new connection with customers and leverage their banking data, such as income and spending activity. The resulting cash flows, in real time, provide businesses with better insights and actionable information to adjust their strategies for today's consumers.

The businesses we work with are constantly seeking ways to add value to their customer base. New consumer insights uncovered through open banking data can help

businesses create better loyalty programs and provide tailored incentives to improve satisfaction and retention and reduce churn. Not only do businesses get better quality consumer data that's up-to-date, but consumers also benefit by getting tailored deals and incentives that meet their needs.

Separately, new advancements in artificial intelligence (AI) have enabled fraudsters to step up their attacks with more sophisticated methods to breach merchant databases or commit large-scale fraud. To mitigate these risks and address the lapses in consumer identification, account verification and fraud prevention, Trustly's proprietary risk engine leverages advanced data science and machine learning to identify potential risks and optimize decision-making processes for consumer accounts. Additionally, our technology extends the already

powerful set of identification tools banks use, creating two layers of protection and data security. This enables open banking payments, which are built on top of online banking data, to be more convenient and safer than many other payment options, e.g. approving more transactions, and at a lower cost than cards. Through open banking, businesses become empowered to anticipate and respond effectively to uncertainties created by the risk of fraud, allowing them to minimize disruptions and maximize opportunities for growth.

With open banking at the core of our approach, we're proactively shaping the future of financial services, putting the bank account back at the center of people's financial lives. Trustly offers businesses a simple and safe approach to connecting with customers via open banking, and our innovative solutions are at the forefront of a new wave of customer relationship management that can help businesses weather uncertainty ahead.

# ADAPTING TO CHANGE:

## HOW TECHNOLOGY SHAPES THE FUTURE OF CONSUMER FINANCE

**A**s we end the first quarter of 2024, businesses across the country are navigating an array of challenges and uncertainties. Economic and inflationary fluctuations, job market instability, and market volatility present a complex environment of risks and opportunities affecting operations and growth. These concerns, as well as factors like high housing and interest rates, are prompting businesses to reevaluate their strategies and seek innovative solutions to help them execute.

ED  
**O'DONNELL**  
CEO





At Versatile Credit, we recognize the transformative power of data and technology in building a holistic understanding and solution for our partners. Versatile aims to empower our partners with the tools to offer embedded consumer financing options that align with their customers' needs and financial situations, wherever and however they are choosing to engage with the brand, including in-store, eCommerce sites, in the home, through call centers and more.

Economic and market uncertainties have led more businesses, from home improvement and electronics retailers to furniture stores and elective medical providers, to explore how consumer financing can support their customers in budgeting more effectively and ensuring access to their goods and services. By offering a flexible and personalized financing experience, businesses are enabling

their customers to explore a full spectrum of options without impacting their credit scores. This approach builds a sense of trust and loyalty between the business and its customers, enhancing the experience and boosting conversion rates.

The integration of technology that supports choice in how consumers pay is a cornerstone of Versatile's offerings. We work with industry-leading platforms such as STORIS and incorporate cutting-edge third-party tools, including industry-leading identity verification solutions from partners like Prove and Intellicheck. These integrations ensure our solutions are not only secure but also aligned with our clients' existing processes and needs, boosting operational efficiencies while creating a scalable and compliant financing experience.

Versatile works closely with our merchants to understand their unique business needs and processes. Our objective is to build and deploy tailored solutions that maximize success and adoption, ensuring a positive experience for shoppers, staff, and stakeholders. By leveraging existing technologies and processes, we can embed financing solutions that complement and enhance our clients' operational workflows, leading to higher adoption rates and an improved, optimized experience.

Versatile is also working with banks and lenders to white-label our technology, including our unified finance portal — enabling these organizations to leverage Versatile's expertise and established technology platform to quickly enter markets with innovative financing options and tools. This allows them to offer unique

financing solutions across new verticals without shifting focus from their core competencies while helping them to capitalize on emerging opportunities and meet the diverse and evolving needs of their customers.

Versatile Credit is addressing the complex demands of customers, partners, and consumers by building cutting-edge embedded financing technology and developing strategic partnerships and integrations. Amid economic uncertainty, our strong partnerships and innovative technology enable us to remain agile and responsive, empowering our partners with the necessary tools and insights to adapt and react effectively to the evolving needs of the market.

# ABOUT

## PYMNTS®

PYMNTS is where the best minds and the best content meet on the web to learn about “What’s Next” in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.



The Implications of Uncertainty: Middle Market Companies Reckon With Risk and Reward eBook may be updated periodically. While reasonable efforts are made to keep the content accurate and up-to-date, PYMNTS: MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, REGARDING THE CORRECTNESS, ACCURACY, COMPLETENESS, ADEQUACY, OR RELIABILITY OF OR THE USE OF OR RESULTS THAT MAY BE GENERATED FROM THE USE OF THE INFORMATION OR THAT THE CONTENT WILL SATISFY YOUR REQUIREMENTS OR EXPECTATIONS. THE CONTENT IS PROVIDED “AS IS” AND ON AN “AS AVAILABLE” BASIS. YOU EXPRESSLY AGREE THAT YOUR USE OF THE CONTENT IS AT YOUR SOLE RISK. PYMNTS.COM SHALL HAVE NO LIABILITY FOR ANY INTERRUPTIONS IN THE CONTENT THAT IS PROVIDED AND DISCLAIMS ALL WARRANTIES WITH REGARD TO THE CONTENT, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT AND TITLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES, AND, IN SUCH CASES, THE STATED EXCLUSIONS DO NOT APPLY. PYMNTS.COM RESERVES THE RIGHT AND SHOULD NOT BE LIABLE SHOULD IT EXERCISE ITS RIGHT TO MODIFY, INTERRUPT, OR DISCONTINUE THE AVAILABILITY OF THE CONTENT OR ANY COMPONENT OF IT WITH OR WITHOUT NOTICE.

PYMNTS SHALL NOT BE LIABLE FOR ANY DAMAGES WHATSOEVER, AND, IN PARTICULAR, SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, OR DAMAGES FOR LOST PROFITS, LOSS OF REVENUE, OR LOSS OF USE, ARISING OUT OF OR RELATED TO THE CONTENT, WHETHER SUCH DAMAGES ARISE IN CONTRACT, NEGLIGENCE, TORT, UNDER STATUTE, IN EQUITY, AT LAW, OR OTHERWISE, EVEN IF PYMNTS.COM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

SOME JURISDICTIONS DO NOT ALLOW FOR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, AND IN SUCH CASES SOME OF THE ABOVE LIMITATIONS DO NOT APPLY. THE ABOVE DISCLAIMERS AND LIMITATIONS ARE PROVIDED BY PYMNTS.COM AND ITS PARENTS, AFFILIATED AND RELATED COMPANIES, CONTRACTORS, AND SPONSORS, AND EACH OF ITS RESPECTIVE DIRECTORS, OFFICERS, MEMBERS, EMPLOYEES, AGENTS, CONTENT COMPONENT PROVIDERS, LICENSORS, AND ADVISERS.

Components of the content original to and the compilation produced by PYMNTS is the property of PYMNTS and cannot be reproduced without its prior written permission.