
Payments Pros – The Payments Law Podcast: ACH Risk for Payment Processors and ODFIs**Host: Keith Barnett and Carlin McCrory****Guests: Nanci Mckenzie and James Rowe****Carlin McCrory:**

Welcome to another episode of *Payments Pros*, a Troutman Pepper podcast focusing on the highly regulated and ever evolving payment processing industry. This podcast features insights from members of our FinTech and payments practice, as well as guest commentary from business leaders and regulatory experts in the payments industry. I'm Carlin McCrory, one of the hosts of the podcast. Before we jump into today's episode, don't forget to check out our other podcast on troutman.com/podcast. We have episodes that focus on trends that drive digital assets, enforcement activity, consumer financial services, and more. Make sure to subscribe to hear the latest episodes. Today I'm joined by James Rowe and Nanci McKenzie from Affirmative Technologies, along with my colleague, Keith Barnett, to discuss ACH originator Risk. Affirmative Technologies is one of the nation's leading technology providers in ACH processing and risk management software.

They provide innovative electronic payment solutions to a wide variety of businesses, including financial institutions, third party payment processors, and business entities that seek an effective enterprise, ACH payment solution. James has served as chairman of affirmative technologies for over five years and has pioneered data analytics for companies like FIS, Black Knight, and Optimal Blue. Nanci serves as affirmative technology executive vice president of compliance and product strategy. She has over 36 years of experience in the financial industry.

Keith Barnett:

Thanks, Carlin, for that intro. I just want to add one thing before we get into the nitty-gritty of this. One of the issues for payment processors and ODFIs generally, especially those who process payments in higher risk industries, is keeping the unauthorized return rate down within the Nacha limits. James and Nanci are here to talk about a predictive model that payment processors and ODFIs can use before onboarding and originator. And this predictive model will allow the ODFIs and processors to assess the risk of a particular originator. So, by doing this, the payment processor and ODFI can decide whether to onboard an originator or know how to appropriately monitor the originator once they are onboarded. This is especially important for Nacha rule compliance, but also in the event that the CFPB or FTC investigates the merchant for fraud and decides that the processor, or ODFI, should have stopped the fraud by cutting off the merchant's access to the network due to high return rates. So, I think I've said enough. Let's just turn this over to the stars of the show. James and Nanci, welcome to *Payments Pros*.

Nanci Mckenzie:

Thanks for having us.

James Rowe:

Yeah, thank you so much, Keith and Carlin, and I guess I want to start by addressing what I'm sure you have as an obvious question in your mind is, how can Nanci and I look so young for both having 30 years' experience? I want to get that out of the way. It's the elephant in the

room, and it's because we've found the Fountain of Youth down here in Florida. I live in Tampa and Nanci lives in Orlando, so the sun keeps us young.

Keith Barnett:

I thought, just you started this at five years old.

James Rowe:

We were prodigies. That's right.

Keith Barnett:

In addition to you being a prodigy, it'd be great if you just tell us about your backgrounds and, James especially, we'd love to know how you came up with this ACH risk scoring tool.

James Rowe:

I'd love to answer that question, Keith, and begin by framing up why it's such an important issue for the industry. But Nanci, why don't you please go ahead and introduce yourself.

Nanci Mckenzie:

Okay, sure. I am Nanci McKenzie, I'm the Executive Vice President of Compliance and Product Strategy here at Affirmative Technologies. I've been in the industry for a long time. Started as a part-time drive-up teller in a little town called Sioux City, Iowa. But come a long way, now I'm in Florida and I've been a part of a payments association. I've had my AAP, which is an accredited ACH professional since 2004, and my APRP, which is an accredited ACH risk professional, which are both honored by and supported by Nacha. I've had that one since 2018. Been doing this risk management gig for affirmative technologies now for just about three years, and really excited about the ability for us to help ODFIs, or in other words, originating depository financial institutions, ODFIs, help monitor and manage the risks that they are exposed to from their corporate customers and corporate members that they're offering ACH services to, wire transfer services to, and remote deposit capture services to.

Just really honored to be able to work with someone like James Rowe, and providing this excellent set of controls that we have as our risk management platform to the clients that we have, and the rest of the financial industry. With that, I'm going to pass it back over to James, and I know he's got a whole lot of really very interesting things to tell you about what it is that we are going to be looking at as far as the risk rating for these corporate originators.

James Rowe:

Thanks, Nanci, and I appreciate your kind words, but we're lucky to have you on the affirmative team for sure, with your wisdom and expertise in the industry. I have been a part of Affirmative for five years. I'm a member of the ownership team at Affirmative, I serve as chairman. Professionally, I am, I guess what you'd call today, a data scientist. I trained as an econometrician in the early nineties, both undergraduate and graduate degrees in that discipline and have spent my career since then working in financial services, primarily consumer credit, and also payments. Spent some of my formative years in the nineties with what was then a very small credit card company based in Richmond, Virginia called Capital One, and helped them to develop some of their proprietary information-based strategies that helped them grow their business.

I did more learning than contributing then, of course, but put a lot of tools into my toolbox, and have subsequently served in risk management and analytics roles, building scoring tools, proprietary credit scoring tools, other types of predictive analytics. For financial institutions, National Citibank is one, and a number of smaller institutions in a number of different areas of consumer lending. And then I switched and went over to the dark side. Around 2004, I started to work for FinTech providers, spent a number of years at Fidelity Information Services, which, as I'm sure you know, is the largest FinTech provider globally. Ran a number of different business units for them, and then decided I didn't really enjoy working for big companies anymore, I wanted to go work for smaller companies, join them and help them grow. And I've done that in a few areas that Carlin mentioned during the intro. And for the past five years, I've been working on Affirmative.

And one of the things that's my passion, my preeminent passion, professionally, at least, is finding industries and companies that are data rich and helping monetize that data. And what I mean by that is, finding ways to use that data, to leverage that data for the benefit of our clients. That makes us a more valuable provider of services, and that's really what we're interested in sharing, how we're doing that in payments with Affirmative today. And I want to talk a little bit about that. What I'd like to do though is just spend maybe two minutes framing up why this is so important for the industry at large. I think it's important to take a step back and think about the industry as a whole. So, the Federal Reserve, as you know, Keith does a payment study every three years where they'll go and analyze all different types of payments, and they'll break it down.

They don't do it every year, they do it every three years. The last one was released in 22 and it analyzed payments made in 21 and compared them to 2018. There were some very interesting findings in that. The headline finding is that this is all non-cash payments, so this includes electronic payments, ACH, it includes wires and includes credit cards, it includes debit cards. It was \$129 trillion in value of payments in 2021. And that had increased from 98 trillion, almost a hundred trillion dollars in 2018. So, it was an enormous growth over those three years. 90% of that growth, from a hundred trillion to 130 trillion, more or less, 90% of that growth came from ACH.

ACH represents a little over 90 trillion of that 130 trillion. It's actually closer to \$95 trillion. So, ACH electronic payments represent the bulk of non-cash payments made. It's a huge area. In my opinion, it doesn't get enough attention from the industry in terms of the focus on making sure that the system for conducting electronic payments through the ACH network is robust and sound and risk is managed appropriately. Importantly, just a couple more statistics. Importantly, out of that 95 trillion in payments, 30 trillion of that are debits. In other words, it's one person or organization or originator debiting money from someone else's account.

80% of all ACH transactions are so-called off us, right? The inverse of on us. Meaning that there has to be a level of trust between banks, because they're processing payments with each other through the system. So, they can't verify that there are funds in the account, they can't do the types of things that they need to do if they house both the account that's being credited and the account that's being debited. So, it's an enormous industry and there's a requirement for a great deal of trust. And so, this industry is monumental in scope, and it really is important for us to understand that as we talk about some of the technology that exists today, which I'd like to survey, and then some of the new things that we think the industry will make use of over the next couple of years.

But let me pause and see if you or Carlin have any questions or comments at this point.

Keith Barnett:

A quick question for you is, in what manner, if any, will Fed Now change that analysis with respect to, how much are we getting through ACH versus other types of electronic payments?

James Rowe:

Well, so you and I have been in financial services long enough to know, first, that changes are made very slowly. So, it could be this tremendous technology, but it would still take years to take effect and to really take over or encompass on any other area of payments. Now, having said that, the reason that, is the key question in my opinion here is, why is ACH so prevalent? ACH is prevalent because it's the fastest and cheapest way to send money. Fed Now, I think Nanci only does push payments, correct? At this point, not pull. So that's a small portion. And at least as it stands, it's a more expensive method of transferring money. We anticipate it will be, as the Fed rolls it out and more banks join, the cost of conducting those transactions will be potentially considerably higher than ACH.

So, my net assessment of that is that Fed now is really not a significant threat to the bulk of ACH transactions, mostly because it's the perfect balance between speed and cost. And banks are obviously very cost conscious with respect to their operations and what they need to spend to conduct transactions. That's my take on it. Nanci, do you have a take?

Nanci Mckenzie:

I do. So, when it comes to Fed Now, I'm not for or against it. I think Fed Now and RTP are very valid payment channels and they have definite use cases and people are going to use them. However, as James has said, things move slowly. And if we remember, the ACH network went into place in 1972, and we're still talking about it. And we can't forget about the fact that we have same-day ACH. That has a huge impact on the ACH network as well, and the reason why the amount has skyrocketed because of the limit going up to a million dollars. So, when we have the system already in place and it's a, don't need to fix it because it's not broken, I've heard from a lot of financial institutions that, while, yes, we will eventually get onto Fed Now and or RTP, but right now, we're good. Our customers are not really asking for that, so it's still a very strong player in the industry. That's my opinion.

James Rowe:

To Nanci's point, we don't have really much of a stake in the game because we're agnostic by payment channel. If it's electronic payment, financial institutions use our technology. We're a data analytics company, essentially. We report on the payments, we assess risks. And so, it doesn't matter what the rail is, but what we found... It's interesting when we go through our selling process with the prospects, they ask us if we handle wires, if we do RTP. And we do, but at the end of the day, it's usually such a small proportion of the payments that they process. 95% of the Zelle payments settle in ACH. So really, ACH is the backbone, and we think it will continue to be. But these other types of electronic payments, it's nice to have the option of paying more for potentially faster payment.

And notwithstanding Nanci's comment about same-day ACH. That's great, we're all for that, it's all good and it doesn't impact us one way or the other. But it's just hard on my objective view. It'll be very hard to displace, not only the current processes, but also the cost and speed benefits associated with ACH for years to come.

Keith Barnett:

Well, and that leads to the next question. Could you just tell us, tell the audience, how you came to see a need for an ACH risk scoring tool? Can you tell us about that?

James Rowe:

Yeah, so it's an excellent question. When I joined the firm, Affirmative, five years ago, it was 2018, I guess. We started to talk to our clients, and there's a few things that we learned that informed our research and development roadmap. The fundamental thing we learned was, without originator risk, there would really be no need for Affirmative.

That's what we fulfill for our clients. There are about 9,000 financial institutions including credit unions, community banks, up through large national institutions. The client range that we speak with or we survey ranges from asset size of 400 million up to top 10 financial institutions. So, we've got a very representative view in terms of size and geography. I spent a lot of time talking to our clients, and one of the things that became very apparent was how they use our service. They use our service as it has existed over the past five years, for assessing originator risk. And if originators, as you know, most financial institutions have to offer treasury services, they do it for businesses, and then they have to, as a part of those treasury services, they offer payment processing. And a big part of payment processing is conducting their ACH transactions. So, if it weren't for the fact that there are significant number of ACH transactions that are submitted to the system, remember this large system that I spoke to at the outset of the conversation.

If there weren't such a large number of transactions, a large number of originators, and about 2% of the payments, at least based on our data, that are conducted through the ACH network, come back as unauthorized. And then rules around financial institutions, requirements for monitoring and tracking, but also just makes good business sense, right? Because the originating institution can be financially responsible for payments that are put through the network and come back as unauthorized. So, our clients use us to monitor originator activity to make decisions about their originators. Specifically, what originators can I give a lot of credit to? Who can I process transactions for because I know those transactions are not going to be unauthorized? Alternatively, what originators do I need to be wary of putting unauthorized transactions into the system? And the ones that I'm wary of, I need to set some controls around them, limit how much credit I'll give them for transactions in advance of some proportion of them being returned as unauthorized and me having to try to reclaim that money.

So, there are controls in place, and what we learned was, our clients, I asked them, "How do you assess originator risk?" And they said, "Well, what we do is, we'll ask our originators businesses, typically, for P&Ls." Right? Their profit and loss statement for the last couple of years, we'll see if they're profitable. We'll look at other areas of the bank. They may have a commercial loan with us. Are they paying that loan on top? They would use all these proxy measures, but what they're really trying to understand, in the case of originator risk management, is what is the likelihood that that originator is going to submit an unauthorized transaction? And it became very apparent early on to me and the rest of the members of the Affirmative team, it became very apparent, that the one thing they weren't using was actual the historical data for previous transactions from that originator to predict the likelihood that that originator was going to have unauthorized transactions in the future. That technology doesn't exist in the industry. You can relate it to, I'm sure you're familiar with the FICO score. Everybody knows their FICO score.

And the FICO score is built by Fair Isaac and company, and it's been around for a long time. It's 70, 80 years now, and it's based on data that's housed in the credit bureau that described your previous credit activity. How many accounts do you have open? How many have you been delinquent on? And there's all these attributes that they develop that describe your credit history. Well, they've developed a formula that they can use to produce this score based on the attributes, your historical credit activity. And what that score is, it's a three-digit number, typically ranges from 500 to 850, and we all know, hires better than lower. But what that really represents is a probability that you are going to default on a loan that's made to you. That's how banks think about it. When you apply for a credit card, they get your FICO score, they can translate for their own data, their own portfolio, they can translate your FICO score into a probability that you're going to default.

It's not certain, it's a probability. Whether it's 20%, whether it's 80%, and then in the form of setting their score for whether they approve you or decline you for that credit card, it's really how high a probability of loss can we afford to take? And how are we priced associated with that probability? So that technology has been around a long time, and what we see the opportunity to do for this industry now is really to bring that proven capability of leveraging historical data on originators, which we maintain. In our database. We have almost a trillion dollars now in payments every year that come through our database. It's over 500 million payments by unit volume, and we see transactions on about 500,000, half a million originators, on and off. Not all originators originate every month, and these are all tucked up under all of our financial institution clients.

So we store all that, and so the opportunity that we've got is to leverage that data, produce those attributes that define the originator's history, and then use that to produce a score that's just like the FICO score, that the financial institution can then say, based on this score, this risk assessment, I am going to give this originator a lot of credit. Any transaction they put through the system, I'm going to give them immediate availability of funds on that because I know there's such a low likelihood that any of those transactions are going to come back as unauthorized. And at the other end of that, the lower FICO score, if you will, I'm not going to give the originator credit right away. I'm going to wait for the transaction to process, or I'm going to give it a certain period of time. And the benefit of that is, the bank can be very specific with respect to how it treats its customers.

Because if they want to keep their originator happy, they want them to be a lifelong bank customer. And if they're a low-risk originator, there's no reason to lower their limit for funds. Does that make sense? But alternatively, what we found is, there's a very small percentage of originators that produce 80% of the unauthorized activity in the industry. If you can accurately identify those folks, then you can tailor your risk management to them and give everybody else the credit they need, and then you can grow your bank, you can add originators and everybody's happy. So that's why we felt like this technology was needed because what existed in the market... And it's a sound practice. And Nanci will tell you, every financial institution, I'm sure you know this, every financial institution has got to have a risk management protocol. They have to do some set of procedures to assess the risk that their originators are going to put bad transactions in the system.

This is like rocket fuel for that process. It's not that the old process was bad, but we're in a position now to really amplify its power.

Keith Barnett:

Right, and if I remember correctly, the old process, the process that I'm used to is, that you will have the bank or the payment processor that will ask the merchant, ask the originator, "Hey, what have you done in the past? What were your instances of unauthorized and things of that nature?" And it sounds to me like you actually have that data, so the ODFI doesn't need to ask for that information, the third-party center doesn't need to ask for that information. And if I'm understanding you correctly, you present that data to the financial institution, and they make a decision from there. You're not making the decisions for them, you're just presenting them with the data that they need to make an informed decision. Is that right?

James Rowe:

That's right. And what we're doing is, we're taking it, and we're taking the data, and it's the power of the network. So, all of the financial institutions we have, all of these originators, no one financial institution has all of the data on all of the originators that we do on behalf of our clients. So, we see all the payment transactions that come through our system. We store, and then we use those to create these attributes that describe each originator. And then, here's the trick. Think about it as it relates to FICO score. So, what we can do is, we can go back into our database, and we can characterize an originator at a given point in time by these attributes that we created. One example, we have 150 attributes we've created. One attribute is, how many payments have they processed in the last three months? That's a simple example.

How many are credit? How many are debit? We've got 150 of these. And what we can do is, we can look at the originators in the past, how they looked, and then we can see which of those originators actually submitted unauthorized transactions. And then we can build through our statistical modeling a version, like a FICO score, that allows us to assess the risk of each originator. And so, what that does is, we can characterize this risk based on all of the data that we see. An example would be, someone may have in their credit file, they may have two delinquencies in the past 30 days on their credit card. And you apply for a new credit card, and you've got two delinquencies in the past, let's say, three months on other credit cards. Well, because we've seen that type of customer in the past, we can accurately characterize the probability or the risk that that customer is then going to default on the loan that you give them today, right?

So, we can use that predictive capability. In the past, we've primarily focused on what are in statistics are called descriptive analytics. We help our clients understand how many transactions they process, what is their return rate? We give them all these analytics, that they're descriptive analytics, they describe the situation. What we're transitioned into with this is predictive analytics. We can predict something about an originator today based on what we've seen of that originator and how we've seen behavior of other originators in the past translate into bad behavior. So that's the whole nature of the predictive modeling, and it's just like a credit score.

Carlin McCrory:

And what other use cases could there be for something like this risk rating for an ACH originator?

Nanci McKenzie:

I'm going to take that one, James. Okay? So great use case here is once we give this score, translate it into a high, medium or a low risk. You can tie your originator risk reviews or in other

words, your corporate customer, corporate member, risk reviews. And we have a feature too that automates that risk review, so if you have certain criteria that you're going to be reviewing for that particular originator, then you can put that into our risk review module, and then use that risk score to determine how often do you need to review that particular originator. And as James had said, there's very small number, percentage, of originators that actually fall into the high category. But those are the ones that you want to focus on most. So, using that risk rating and tying it to a risk review, which by the way, is one of the items, I'm always the rules and the regulatory and the legal person of the affirmative teens, we relate the most favorite rule of the Nacha operating rules and guidelines book, it's article two, subsection 2.2.3, the ODFI risk management.

And in that rule, it will require that you look at certain items within an originator on their risk reviews, but then also, making the fact that the ODFI is responsible for everything that originator does. So, we really need to be aware of everything that they do. And if they're creating unauthorized returns, and they are a high risk, you need to be looking at them more often and you have to have that information. So that is, I think, the number one use case that we find our clients utilizing because of the ability for us to give the risk rating to them.

James Rowe:

I think there's an operational component and a strategic component. The operational component, as Nanci mentioned, is that we provide these risk ratings, basically translate the FICO scores I've described into a risk rating of high, medium, and low. We provide that to our clients every month. We update it every month based on evolving trends, the originator data, and then they can go in and select the high-risk customers. There's a very small percentage, and they'll have a focus, they'll prioritize the review. Some of our financial institutions have 200,000 originators. How are they going to prioritize that review? Well, they use our technology to do that. They want to focus on the ones that are high risk, and then they'll go through and they'll do their review and document that they've done it, that's the operational component. There's a strategic component too, because management, executive management and board and regulators would like to see the financial institution's overall profile of risk.

And so, we give that, here's the percentage of originators that are low, here's the percentage of originators that are medium, here's the percentage... And here's how it changes over time, so you can assess your risk profile using this measure over time. And then, we also provide you with the means of comparing yourself to the rest of the industry, which is really an unknown to many. Today, they say, "Well, I've got more high-risk originators." It's grown by 5% in the last quarter. Is that good or bad? I don't know because I don't know how the rest of the market's trending. And now you're in a position to be able to do that. So, there's an operational component, Carlin, as well as a strategic component of being able to use that type of technology.

Carlin McCrory:

That's really interesting. And something that would be important for our financial institution clients in the ODFI in this situation is, what are the regulators looking for or asking for in this risk rating and rating an ACH originator?

Nanci Mckenzie:

From what I understand because of the conversations that I have with financial institutions, is that the regulators are the OCC, the NCUA, the FDIC, and the Federal Reserve Board of

Governors. It's very high focus on risk management these days. We can look at any one of the regulators, and you see that they are finding financial institutions that don't have sufficient risk management programs, so one of the ways that you can really tighten up that risk management program is to have some sort of a way to risk rate your corporate customers, corporate members. And so, when it comes to the different regulators, they're asking, they're asking. But of course, we've got then certain financial institutions. If you're over \$10 billion and you're an OCC regulated, you've got to make certain that you go through the proper risk modeling and have that documented.

We've put together the risk modeling for those particular type of clients, but we also then have the smaller financial institutions, as James had mentioned. We've got a lot of, maybe between two to 10 billion in assets, financial institutions. And those are going to be looking at it or their regulators are going to be looking at it a little bit differently than someone who is over 10 billion. So, it's a huge hot topic in today's financial industry. It's just risk management. Overall, everything's risk management, and it's not going away. It just keeps getting bigger and bigger.

James Rowe:

I would equate it to... Not overuse the parallel with lending, but I think there are a few good ones. It used to be, in the seventies and early eighties, it would be a lot of what they call judgmental underwriting. So, people applied for loans, credit card, auto, et cetera, and there would be an underwriter that would make a human decision about whether to approve or decline that loan based on the application information and maybe some guidelines, but they could largely exhibit their own judgment. The use of statistical scoring, and what we've built at Affirmative is an empirically derived and statistically sound model to predict risk. And that phrase is important because that became the requirement under the ECOA, the Equal Credit Opportunity Act, that say, well, financial institutions can move from judgmental underwriting to scoring, which seemed to be so much more efficient and accurate, it removes a lot of the human bias, but the method for building the scoring technology has to be statistically sound, right?

Some of the projects that I worked on in my lending days was to build that type of capability. And so that's what we're doing here, and I think there's probably going to be a similar trend in terms of what regulators expect for financial institutions, in underwriting the unauthorized risk of their originators to move away from what today are largely subjective human-based decisions. And that's because there's no other option. Now, move away from that towards a more score driven, empirically derived approach to making those kinds of assessments. And it's also automate-able, whereas the judgmental approach is really not something that you can automate. So that means it's difficult to scale. If your bank wants to grow and you want to add a lot of new originators as a part of your growth strategy, you need to be able to provide that level of risk management for unauthorized transactions on a higher number of originators. It's very difficult to scale up a judgmental risk assessment process. It's much easier to scale up an automated process that's built on statistical analysis of your originators.

Carlin McCrory:

Yeah, that makes a lot of sense to me. And then, my last question wrapping up here is, what are some of the attributes used in AI to determine the score, and how is this done?

James Rowe:

Artificial intelligence, machine learning, and other hot button phrases. As many people understand AI today, like going to the chat-bots and everything, we don't do that. We use, it's

old school statistical technology. A lot of that is the foundation for what's called machine learning today, but I know that's not the essence of your question. I just wanted to clarify that a little bit. What we found is, we'll go through every... Usually, it's every three or four months. We always track the performance of our scores to see if they're accurate. It's very easy for us to make a prediction and then see if we were accurate because it only takes 30 days to see if the payments were returned or not. So, we're able to track and prove to our clients, "Hey, when we tell you that this is a high-risk originator, just wait 30 days if you don't believe us, and you'll see of the hundred that we told you were high risk originators, 80 of them are going to have unauthorized transactions. So just wait and see, and then you'll believe us, and we'll keep tracking that for you going forward."

So, we redo these analysis on a frequent basis as the underlying data changes and the behaviors change. And so, to answer your question, one is obvious if you've had returns in the past, right? That's kind of too obvious, unauthorized returns. If you've had unauthorized returns in the past, it's likely. But what's important is that not only do we tell you if you've seen those, but we can also quantify the relationship. A little unauthorized activity for a lot of other types of transactions isn't as predictive of unauthorized in the future as a lot of unauthorized transaction activity with other types of transactions mixed in, so we can actually quantify that risk.

Another indicator that we currently see is if your originator is under a third-party payment processor, like the financial institution's got the third-party payment processor and then their originators onto that, as opposed to if the originators are the direct client of the financial institution, that is an indicator of risk. The statistical modeling process is, we're able to take all of these different attributes that we found to be predictive, and we combine everything into one score, so you don't need to look at a lot of different information. We're combining it into one number that you can use to assess risk, and that vastly simplifies what is otherwise a world of very conflicting data and conflicting information.

Carlin McCrory:

Wow, this has been super informative and something that financial institutions definitely need to look into using. It sounds like this is really going to be the future of ODFI's in determining risk. James, Nanci and Keith, thank you for joining us today, and thanks to our audience for listening to today's episode. Don't forget to visit our blog, consumerfinancialserviceslawmonitor.com, and subscribe so you can get the latest updates. Please make sure to also subscribe to this podcast via Apple Podcast, Google Play, Stitcher, or whatever platform you use, and we're looking forward to next time. Thank you all.

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