



## **FINTECH ONE-ON-ONE PODCAST 393-RANDY KERN**

Welcome to the Fintech One-on-One Podcast, Episode No. 393. This is your host, Peter Renton, Chairman and Co-Founder of Fintech Nexus.

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**Peter Renton:** Today on the show, I'm delighted to welcome Randy Kern, he is the Chief Technology Officer at Marqeta. Now, Marqeta, most people in fintech know who they are, they have really been at the center of many of the innovations of the last decade, particularly when it comes to, you know, credit card or debit card technology, they've invented really a whole sub-nature of fintech. Now, I wanted to get Randy on because he's not a lifetime, or he hasn't spent his career in financial services, he's a technologist, but come from outside of finance so in many ways he has a fresh take on some of the issues around fintech.

We talk about modern card-issuing, we talk about the use cases that Marqeta has, we talk about embedded finance, tokenization, digital wallets, we talk about the crypto space, lending and what it's like to manage a tech company across multiple geographies which obviously is quite challenging and much more. It was a fascinating discussion, hope you enjoy the show.

Welcome to the podcast, Randy!

**Randy Kern:** Hey, Peter, thank you, great to be here.

**Peter:** Okay. So, let's get started by giving the listeners a little bit of background. Looking at your LinkedIn profile, it looks like you've been in big tech most of your career, but can you give us some of the highlights of what you did before Marqeta.

**Randy:** As you said, I started back in Microsoft a long time ago, kind of worked through all kinds of different software where I would generally, what I kind of consider systems stuff so I sort of have a very simple view of the world, kind of three major categories when you think about software. I think about user experience, I think about algorithmics, what today we usually think about machine learning and kind of big data and then the third category, is systems, all the glue and everything that allows you to create the rest of that.

And so I've done a lot of work in that space, worked in geeky things like compilers and libraries way, way back when, all the way through like Bing, building a web search and Azure and other large scale systems there. So, interestingly before Microsoft, I was an army of one and I had my own small software company and I actually did finance software, I built a little accounts receivable package in dBase, of all things, so it's kind of fun now at Marqeta being back in the finance sector.



**Peter:** Great, great. So then, what was it that, you know, attracted you both to the position and the company?

**Randy:** Well, Peter, I think it's a really nice combination of great innovation. You know, Marqeta really kind of pioneered the modern card issuing and processing space and we do that through open APIs and we really help our customers and other partners and the rest of the ecosystem to innovate and do new and interesting things around card payments combining kind of that very technical, interesting, creative space of innovation with the kind of scale business, you know, the mission critical aspect that our customers have for Marqeta today and, frankly, the opportunity to help those customers grow and to help Marqeta grow. That really excited me about this place and then as I got to know Jason Gardner, our CEO & Founder, got to know some of the other leaders here and other folks, I just got more and more excited about how I could be part of this and, you know, how this industry would be really a fun thing for me to learn and help drive.

**Peter:** Marqeta has a fairly complex product, I mean, how much did you know about that before you took this job?

**Randy:** Virtually nothing, Peter, so in my head, you know, I still thought of credit cards with like carbon swipe machines and typewriters.

**Peter:** (laughs) Right.

**Randy:** Obviously, it's progressed a lot since then, but I never worked in the space, you know, obviously used debit cards and credit cards, but I'd really never spent much time worrying about how it all worked. And so, that act..., frankly, has been really one of the fun things for me personally here, the ability to dig in really deep, understand, not only how Marqeta's piece of this works as an issuer and processor in that space, but really how the entire flow works and get to know some of the technical challenges, some of the business challenges, some of the scale challenges, trust challenges and really some of the interesting innovation that's happened in the space, whether you think about it from the card network, the merchant acquirer or our piece of the puzzle, the issuer processor.

**Peter:** I've been following your company for a long time now and I've heard your CEO Jason speak at our events and other places and I've been always really impressed because he basically invented something that is completely new and basically took...created a new category and you guys call this category "modern card issuing" so I'd love to get your explanation of what that means from a layman's perspective, how do you describe "modern card issuing?"

**Randy:** I'm still new to the space and so I might get it wrong, but the way I think about this is, is we allow a company who is maybe doing something else in their core business, right, they're not a bank, they're not a digital bank or a physical bank or a retail bank, but we allow them to integrate payment cards, debit cards, pre-paid, credit cards, etc., in a really kind of straightforward way into the rest of their system, into the rest of their product and the rest of their processes to sort of give their products reach out into the real world. You can sort of think of a payment card and taking advantage of those rails as a way to connect your product, your customers, your user base, your sphere, if you will, out into the real world in a really concrete, physical way.



Obviously, you could do this in the past with a TSYS or someone, but it was hard, right, and if you weren't just doing something straight down the middle in kind of very traditional implementation, even that would take a long period of time and a lot of work. But if you really wanted to push innovation and you want to do kind of unique and different and interesting things in the space, then maybe the card aspect was a key critical piece of your product or your business, but wasn't necessarily the center, was really, really hard to do.

And so the way I think about this is we provide a technology, we provide the platform exposed through open APIs that makes it really, really easy to add payment cards on to whatever else you're doing. You don't need great expertise with the banks, you don't need great expertise with the card networks, we provide all that for you and we provide the technology stack to make it comparatively trivial to issue cards and process payments.

**Peter:** Right. And it's not just about, you know, the processing payments thing is really key, but what I always think about Marqeta and I explain what it does to other people in the industry, I always give them an example of like, I think this was one of your clients and if they still are, DoorDash or InstaCart might have been, like someone used to go to a store and put money on a card and pay for something.

Someone might have ordered \$50 worth of groceries and the InstaCart person has got to pay for that, but you don't want them slipping in some of their own products in there so you make it so that it's really \$50 on their card and like that is complex technology that, in the moment, someone goes to swipe, they try and swipe \$60, it's really only authorized for \$50 and it's only authorized at this particular store. Am I describing one of the use cases and maybe you can expand on that and talk about other types of use cases that Marqeta is doing today.

**Randy:** You nailed it, Peter. You know, on-demand delivery, whether it's InstaCart, DoorDash or many others, kind of was one of the original breakthrough use cases, if you will, of our technology and our platform and in particular a feature we call JIT or Just-In-Time Funding. To extract that a little bit, the way I think about JIT, it's a way for our customers to participate in the transaction flow.

In the case of on-demand delivery, it's really to make sure that you've got an agent, have that location at the right time buying something for the right amount. And kind of make sure that there isn't leakage to the system there, but that same kind of idea of stitching together our platform, our open APIs and really bringing new and unique innovation. I would say that powered on-demand delivery, it's also been a huge proponent or a huge ingredient of enabling the innovation around buy now, pay later.

So, this is the space where, especially someone needs to create a card on-demand, in real-time, maybe push it to a phone, you use it in a retailer for a purchase that you've been kind of immediately authorized for, this kind of turnaround time is unprecedented and is possible because of the deep integration with our customers and our APIs.

So, that's another case where we're sort of allowing our customer to innovate, to drive their ideas and do it on top of that modern card issuing and processing platform using those open APIs and using that kind of real-time ability to influence, whether it's the transaction flow or issuing a card and kind of managing all of that. You know, it's opened up a huge amount of innovation in the buy now, pay later



space and we've got customers who do similar things in expense management. Less about creating a card on-demand for most of them, but more about really kind of understanding enterprise expense and ensuring that those corporate cards are being used appropriately.

So, there's a wide range of scenarios and use cases, you know, even all the way out to something like a Coinbase where there's kind of just in time conversion from your crypto balances in your Coinbase wallet. They use our APIs and the ability to be in that transaction flow to do a just in time conversion to fiat currency so we transact in fiat, we settle in fiat just like a normal card, but because of the ability to interact with our platform with these kind of simple APIs and really inject really innovative, interesting logic right there in the transaction, I'm continuously amazed and impressed by the creativity that our customers and partners bring.

**Peter:** Right, right, sure. And then, one other use case I want to touch on because it was just announced, I think it was just last week, was your deal with Uber and this was a four-way partnership, it was Marqeta, Uber, Branch, and Mastercard and maybe you can just describe it a little bit about what you guys are doing there.

**Randy:** We're really excited about this, this is the Uber ProCard. The simplest way I think about this is it's an Uber card that provides rewards for gas or EV charging and really is used for drivers and agents in the network. So, like you said, it's a four-way partnership, lots of focus involved in that, but we provide that platform for issuing and processing and kind of ensuring that the right logic is being applied real-time through that transaction flow.

**Peter:** I want to talk about your role and, you know, every company obviously has a major tech component these days, but you being a CTO at a tech company because Marqeta's product is tech. So, I'd love to sort of think about, now that you've come from sort of enterprise tech to a fintech business, how do you think about your role, particularly when it comes to scaling a fintech business.

**Randy:** In all honesty, I think there's a lot of parallels with sort of more traditional enterprise software and the needs of fintech. Maybe I'm a little biased there because in the past I've had a lot of customers and partners even when I was in non-fintech companies who were in the finance sector and so I'm already fairly familiar with their needs and kind of requirements, whether it's around scale, whether it's cyber security, privacy, kind of the regulatory environment. These are things that I'm accustomed to supporting, maybe not directly, being in the industry, but I've provided a lot of platforms and services over the years to help power other fintechs and other finance corporations and organizations to be successful in their businesses.

You know, I think what's interesting really for me being in a fintech, especially a place like Marqeta, it's a 24/7 product. We have cardholders out there who are running their business, whether it's InstaCart, whether it's Uber, whether it's any of these organizations, their business is dependent on the ability to interact with the rest of the world using those cards, 24/7, constant up-time, great reliability, paramount importance.

Likewise, we've got customers whose business is more in the consumer space, there you've got a person, a cardholder, maybe they're filling up gas so they can get to work, maybe they're buying groceries to go home for their family for the weekend. These are really, really important scenarios and



they have to work, so the reliability that we provide, the accuracy that we provide and to your point, the scalability so that our customers can keep growing, can keep building their businesses, innovating in new ways and keep growing and then supporting a larger and larger set of customers, for me, that's incredibly important.

And so it really has us focused, to be honest, on the basics, on scale, on cyber security, the architecture of our systems to provide really robust, reliable services and the special unique ingredient in the fintech space and at Marqeta really even more so, is doing all that with a drumbeat of constant innovation as well. You know, we're not just focused on building a bigger and bigger product, we want to have a bigger and bigger product with more and more scale and more and more reliability while at the same time adding more and more innovation to our customers and supporting more and more creativity and innovation in the entire industry as well. So, that balancing act in really doing both of these at once, that's kind of unique and to be honest, a lot of fun, Peter.

**Peter:** Okay, great. I want to talk about embedded finance for a minute because, you know, I've heard Jason Gardner talk about this, would love to get your perspective because the movement towards embedded finance. It feels like you know that's really enabled in many ways the success of Marqeta and so what is sort of the talk inside Marqeta about this kind of movement towards, you know, just plugging in a piece.

It reminds me of sort of this...I actually have a Computer Science degree and I remember when we moved from COBOL and Fortran and Pascal, I'm dating myself here, and then we moved to object oriented programming where suddenly it was something that was repeatable, you just plug it in and repeat it and use it. And it feels like to me that this is really such an important piece in this unique time that we're in. How do you think about embedded finance?

**Randy:** You know, I like that parallel a lot. I'd add another one from my experience on the Internet. Early on, the Internet was a bunch of, you know, one-off bespoke websites, you grab a browser, you go read some content, catch up, maybe learn something, talk with some friends on a BBAS or something. As the Internet evolved though, those units became a little more consistent, they also became more service-oriented and so you got to the point where you could sort of start to build other services and other capabilities and almost other websites on top of all the things out there on the web.

Early on, it was really hard for anything other than a human to consume a website and there were no APIs, there was no structure, right, it was just a bunch of written text and, with some HTML markup. As that's evolved to be more and more services, you know, Software-as-a Service, is this kind of fundamental shift that allows you now to sort of embed and leverage more and more of these capabilities and services and so the Internet has become richer and richer and sort of more and more powerful. The same thing kind of happened yet again with the phone, right, as we thought about having a phone do a lot more, you know, more than make a phone call, more than a text message, more and more it's sort of your entry point, your integration point, for all of these services that you need both personally as well as professionally.

And to me, embedded finance is kind of the same way, it's how do we bring the aspect of the financial equation that's important in the moment to whatever else you're doing, to whatever else what the work flow is as opposed to sort of making you as a human, as a user stitch all this together yourself. Now,



it's directly inflow in context and that's possible to your point because all these kind of underlying services have become a lot more accessible and a lot more repeatable.

Coming back to Marqeta, the fact that we have that platform, that we have this rich, modern platform exposed via APIs makes it very easy to bring whatever aspect of payments, whatever aspect of finance you need into that context, into that scenario. And, frankly, in my opinion, provide a much better end-user experience because you don't have to keep kind of switching back and forth between what are you worried about and what are you focused on in the moment.

**Peter:** I applied for a credit card from one of the major banks fairly recently because I play the mileage game always, I've got so many credit and debit cards because I also have all the fintech companies as well. It shocked me because I applied for my credit card, I got approved and then they said, you'll receive your card in seven to ten days because I've just become used to this when I apply to a fintech company saying, here's your card, you can upload it into your Apple wallet and you can use it now.

In my perspective, you know, you're moving into sort of tokenization of credit cards and digital wallet space, I think it's really exciting, it has so much more utility, you don't have to wait as much, I mean, maybe you could talk a little bit about, you know, the growth of digital wallets and how your technology is really building on that growth.

**Randy:** Absolutely, Peter, and I can only imagine how hard your physical wallet is (Peter laughs), if you apply for all these. Another added benefit for someone who likes to experiment and experience all these in a digital wallet is the thing doesn't physically grow. The virtual wallet is an amazing bit of innovation and whether you use a virtual card, one of the powerful things about Marqeta is you can issue a virtual card that just goes directly into a wallet or you can issue a physical card.

We also provide Tokenization-as-a-Service capability so for our customers who aren't necessarily using a Marqeta powered card or a Marqeta-issued physical card, in the first place, they can still use our APIs, and our open platform to tokenize their physical cards and kind of help bridge that gap from a, you know, it's seven to ten working days. And, you know, actually frankly, over the last couple of years at times it's been much worse due to some supply chain constraints so I know some folks in the industry who've waited a long time to be able to fulfill cards over the last couple of years. It's getting better, but it was definitely rough for a while. So, the idea that you can use it right away, buy-now, pay-later is sort of predicated on this capability.

**Peter:** Right.

**Randy:** You know, if you're standing in line, you're like, yeah, I want to buy-now, pay-later for that, you're not going to sit there and wait a week or two until you get the card and then go do it. You really need the capability to tokenize that and have it show up in a digital wallet and kind of use that at real-time. So, I'm a huge fan of these capabilities and these technologies, you know, when I'm standing in line, I'm always looking to see and prefer to use my own phone and digital wallet whenever I can. It's been really fun actually to help some customers, some large organizations bridge that gap, if you will, from a more legacy card product into a much more modern experience for their customers through our tokenization services. So, I think it's a great sort of stepping stone to a full-on virtual card world.



**Peter:** Can we just dig into tokenization for a minute because, I mean, I feel like there's a security element here as well, right. Maybe you could just explain how the tokenization works because obviously you've got a real...your regular card number and then maybe you explain that rather than me try to.

**Randy:** Hey, Peter, there's a good chance you know it better than I do, but, you know, the highlight here is the idea of losing a card number and getting that....unfortunately, all too common call from Amex saying, were these your charges? No. Okay, well we've cancelled your card, a new one's on the way. With a tokenized card, you don't suffer that kind of loss, right, so instead of that card number being sort of a permanent thing that has to get out in the real world to be used, what's great about the tokenized example is that that real card number, that identity that says that, yes, this is Randy Kern and I'm making this transaction, never really gets out in the ecosystem-at-large. It's sort of obscured, if you will, through a few layers of math and effectively numbers that are used for very short periods of time and don't get re-used across purchases and across situations.

So, effectively through factorization and some fairly simplistic cryptography we are able to provide an experience that's much, much, much more secure and you really don't have to worry now about, you know, maybe through this particular transaction someone glances over and steals your card number or any of the myriad of other ways that card numbers get lost and compromised when using a more traditional physical card or entering your physical card credentials through a website directly.

So, the idea of being able to take, to accept tokenized payment, obviously that makes things safer for the merchant, for the retailer and as a cardholder you know, using your digital wallet, using tokenized payment is a much, much, much safer contraption. I geeked out quite a bit on this even before I was in the fintech space. When I first started to read about the Android wallet and Apple wallet, just the way all of this worked mathematically is very elegant, but pretty simple, but it really kind of solves this problem in a very fundamental way.

**Peter:** Interesting, interesting. I want to talk about lending, you know, Marqeta's done a lot of work in the lending space, maybe you could just sort of describe what you're doing for small business lenders today.

**Randy:** So, we're not in the underwriting space.

**Peter:** Sure.

**Randy:** We don't lend directly, but by providing once again kind of the same capabilities of card issuing, Just-in-Time card issuing, sort of our credit product allows folks to manage a revolving line of credit and have all the right credit management capabilities, all the right statement generation, APR calculations, rewards, kind of of all the things you might want to build around a credit program and a lending program.

Once again through the kind of openness and API capabilities of the platform, we help others innovate and experiment in that space and bring a lot of creativity in their part of it, maybe it's small business lending, maybe it's consumer lending, maybe it's credit builder type programs, really a plethora of ideas here by providing that platform and that open innovation on top of the platform through our APIs.



It's quite impressive actually, that velocity, if you will, of change and experimentation that I see happening.

**Peter:** So, you mentioned a few times here this concept of open APIs, can you explain exactly what that is as opposed to I presume a closed API and how that helps kind of like, speed the development process of fintech products.

**Randy:** Well, a couple of things. So, first off, all the documentation is on our website, anyone can go and look, can read and see everything about it. So, building against Marqeta is a relatively simple thing, you know, you can start to experiment and try things right off the bat, you can sign up in what we call a sandbox and build your idea very quickly and kind of experiment and innovate and see if what you're daydreaming about is something that you can see through and actually build. This is, you know, different from a more traditional closed system where maybe you need to buy the software, get a big license, install it somewhere and then start building, right.

So, we allow you to read everything about it right upfront, to experiment a little bit and then it's only as you start to actually transact with us, you know, obviously, we need to do some work upfront, put a contract in place, provide assurances of all the regulatory constraints and needs, but it's really only when you start to transact and do business through the system that we sort of really need a commercial relationship. By providing all the documentation, what we call a sandbox, you know, a place to really experiment and get to know what Marqeta does, and how they take advantage of it for your use case and your scenario, that's really what I mean by that.

**Peter:** Okay, okay. You're a global business, I don't actually know how many countries you're in, but I know you're in Europe because I've spoken to your people in London there, how are you managing the tech across all these different countries because every, all the card systems are different. I imagine, that's not a trivial problem, right?

**Randy:** It's quite challenging and not only are there technical differences, but there is regulatory differences as well, there's also just use case differences. Some of the behaviors are different, obviously, multi-currency if you're traveling it starts to be a thing so the complexity goes up very, very, very quickly. I have to say, this is a space where the sort of innovation and change over the last 10/20 years has been tremendous. You know I remember, not long ago, when I personally would want to travel, it was a cash effort. If I was going to Europe, I'd need to go get cash in a local currency, either convert when I got there, or before I left, because my card probably didn't work when I traveled. Today, I travel all over the world and I carry the same set of cards and they have worked everywhere I've been for a long time.

So, that kind of level of innovation and integration globally is really, really impressive as sort of a technologist because I know how complicated it is to do that. In our own case, we build one platform that works globally so we may have instances in multiple places, obviously, we integrate with different customers and different systems and capabilities globally, but it's one piece of software, it's one sort of global system that we operate, but it's specialized and extended to integrate into whatever local needs our customers have in those markets that we support.





As you mentioned, the European Union, the UK, these are big markets for us and there's complexity there, right. As an example, 3DS, 3D Secure, the sort of ability to challenge a transaction from the merchant all the way back to the cardholder, that's very rarely done in the US, a few merchants do, but it's a really, really rare thing. You know, it's a required capability in Europe and we are providing support for that within the Marqeta platform, we're not only able to support either US or European cards in the European Union, but we can actually now bring that capability to the US as well. So, we find in general, when we have to specialize, and sometimes we'll build a feature for a particular market. In many cases, that advancement or that innovation brings some value worldwide.

**Peter:** Right.

**Randy:** But to your point, the complexity is a lot and we have to sort of balance both the technical challenges as well as the regulatory challenges that our customers work through.

**Peter:** Right, okay. So, last question then. I know Marqeta's a public company, you can't divulge any future products that you might be releasing, but I'd love to get a sense of what excites you today when you're looking at the future of Marqeta and this industry?

**Randy:** You know, I think a lot of what got me excited a little over a year ago when I joined the company is what gets me excited everyday and, you know, gets my creative side going. You know, seeing what our customers do with our products and our platform everyday, having those conversations about what they'd like to do and then thinking about how I can make that easier and how I can bring them more success, more stability, more growth, happier customers in their businesses as well, I really love that.

You know, seeing that sort of continual innovation and being in this platform space where we can provide that underlying power or underlying capability and frankly, see it go places that we may never have even foreseen, it's so much fun. And then, obviously, through those conversations we get our own ideas and we get our own innovation and our own creativity that we then bring back to the market as well and so you wind up with this really, really enjoyable flywheel.

**Peter:** Right, right, indeed it is. I think there's so much opportunity ahead of us, we're really just all getting started here in fintech. So, Randy, thank you so much for coming on the show today, I really appreciate your time.

**Randy:** Thank you, Peter, I enjoyed it.

**Peter:** You know, I continue to be impressed with what Marqeta has done and continues to do in the fintech space and, you know, the movement towards digital wallets, as I said, I mean, we're going away from a physical card. I think the movement towards digital wallets opens up more and more use cases I think that haven't even been thought of yet and you've got the technology.

I mean, some of the use cases that we talked about here would have just been inconceivable ten years ago, we wouldn't even know how to really think about them as a possibility. And so, now we have this technology that is, it's fast, it's reliable and, you know, the use cases I think are only going to



expand as people get this capability and sort of play with it and run with it, and I'm excited to see what new developments are down the line.

Anyway on that note, I will sign off. I very much appreciate you listening and I'll catch you next time. Bye.

(music)