



PODCAST TRANSCRIPTION SESSION NO. 178/CHARLIE MOORE

Welcome to the Lend Academy Podcast, Episode No. 178. This is your host, Peter Renton, Founder of Lend Academy and Co-Founder of LendIt Fintech.

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Today's show is sponsored by LendIt Fintech USA 2019, the world's leading event in financial services innovation. It's coming up on April 8th and 9th, 2019, at Moscone West in San Francisco. We've recently opened registration as well as speaker applications. You can find out more by going to lendit.com/usa

Peter Renton: Today on the show, I'm delighted to welcome Charlie Moore, he is the CEO and President of Global Debt Registry. Now GDR have been around for a while, particularly in the marketplace lending space, but their goals are much bigger than just this space. They really are looking to transform the structured credit markets and bringing more efficiency and transparency to these markets, so we go into that in some depth.

We talk about what their technology is, how it is actually going to change the securitization markets, we talk about what they were doing before they started...they incorporated blockchain and what was the aha moment for Charlie in really shifting the direction of his company. It was a fascinating interview, I hope you enjoy the show.

Welcome to the podcast, Charlie!

Charlie Moore: Thanks for having me, Peter.

Peter: Okay, so I'd like to get this thing started by giving the listeners a little bit of background about yourself. Maybe you can just tell us what you've done in your career before you got to Global Debt Registry.

Charlie: Sure, so I've been involved in emerging technology and financial services for the last 20/25 years, running innovation and new ventures-type groups at Thomson Reuters here in New York and previously Barclays and Lloyds in the UK. Really been involved in the space ever since the first dot-com boom in the middle/late 90's where I got caught up in the sort of potential opportunities, did my own startup and I've doing sort of new ventures be it with startups, standalone or within large corporations, financial institutions ever since.

Peter: So your accent....you're from London originally, are you? Where are you from?

Charlie: Originally from London, yeah, I've been here 12 or so years, came over with Reuters, but also married to an American.

Peter: Right, right, as am I, yes, I understand. Okay, so then you joined Global Debt Registry a few years ago. Maybe we get started...why don't you tell us....because Global Debt Registry has been around quite some time. I wasn't aware of it myself till I started doing some research prior to this interview, how long they've been around, so maybe you can tell us a little bit about the history and how you got involved.



Charlie: Sure, so Global Debt Registry or GDR has been around eight to nine years, it started life in the non-performing accounts world, so the charged-off receivables, really focused on helping prove chain of title and asset integrity in that market which is, if you're familiar with the charged-off world, that is in fact very messy in terms of keeping track of these charged-off accounts and record keeping isn't as robust as it probably needs to be.

So I got involved about three or four years ago coming out of a large company at that time, really because I was seeing a lot more innovation in terms of financial technologies occurring in the small startup world, as opposed to the large corporate world and that generally continues to be the case.

Peter: Okay, so then you started off as like the Chief Commercial Officer it seems. I went back and looked at ...actually watched your Finovate demo from 2014 so obviously, you've been there awhile. What did you see specifically about the opportunity at GDR?

Charlie: I saw a very large inefficient market, lacking any infrastructure or standards or way of keeping track of transactions, which having come from the capital markets world, focused a lot on the real-time trading activity and research distribution where everything is extremely well tracked and a lot of registry controls as well. I was surprised that there was this very large startup world lacking infrastructure, but over time it sort of was clear to us that really to address the asset integrity issues of performing accounts or non-performing accounts where you need to start with performing accounts and start further up the chain, and that a lot of the underlying issues and challenges and inefficiencies, they weren't unique for sort of the debt sales market. It really was throughout the sort of the account life cycle so we started working with looking at performing accounts world and worked with the investors and the single lenders, and supporting particularly digital lending, and we can talk about the asset class in a bit more detail. But we started working with the participants in that ecosystem to generally improve the efficiency and the integrity of the underlying assets a few years back.

Peter: Okay, so then it strikes me as you're talking then that this is really.....the financial crisis was caused by part of what you're talking about there, sort of the lack of integrity in the underlying loans. I mean, there are people we know today, probably tens of thousands of people whose loan documents just didn't seem to exist anymore and so certainly there was a problem with integrity of data back then. Is this the problem that ...is that the sort of idea that kind of germinated this whole problem?

Charlie: It's clearly something that's at the back of everybody's mind. I think any technology is only as good as how it's implemented by people. So we can talk about sort of power and value that blockchain generally brings to this party but it's only as good as how an industry organizes itself and people choose to adopt and apply that technology. So it could change technology, improve the sort of immutability of record keeping and ensure that loan information wasn't misrepresented or lost and that the underlying loan documents and records of ownership and economic interest and so on are much more robust absolutely, but only as applied appropriately and the right parties agree to how it should be done.

So clearly, there has been some improvements since 2008 in terms of improved investors' transparency with Reg AB, but we're still lacking a lot of the infrastructure really required to move the industry on which blockchain, we believe, derives all of that potential.



Peter: Right. So you're already into blockchain a lot now, I'll get into that in a bit, but I'm curious.....because when I watched your finovate demo, obviously, you didn't mention the word blockchain, it wasn't mentioned back then. So when was it that you sort of changed your premise or how you were going to kind of solve the problem?

Charlie: Sure, so the business as a whole has been focused on what I would call asset integrity and there's a number of elements to that in terms of different loan characteristics. I think my aha moment, and everybody has an aha moment, I was exposed to cryptocurrency fairly early on and I didn't really get it and it was back in 2012/2013. It wasn't until probably 2015, maybe early 2016, when I was actually watching a presentation from Leanne Kemp of Everledger who founded The Diamond Registry on the blockchain. He was talking about the provenance of things, of diamonds, and talking about keeping better quality records, of the quality of the stones, the cut and the color, etc., etc. as well as the ownership and chain of ownership ensuring that they were indeed diamonds and so on and refuting some of the reported costs around verifying those diamonds. I was sitting there listening to Leanne and I think, hang on a minute, these are all the things and underlying challenges that we have in the credit ecosystem in terms of keeping track of loans.

So that was around 2015 or 2016 which also coincided....at the end of 2016, the SFIG Trade Association put out a white paper with Deloitte that aligned very much to our business plan and the business status that we've put forward so that was good validation. I think over the last couple of years, sort of the evolution in terms of understanding of the opportunity and the application that is blockchain technology has evolved from beyond just sort of immutable, better quality record keeping through the shared system of record and a vehicle to ensure that everybody across the credit ecosystem is looking at the same loan data simultaneously and the current email Excel site model hasn't got out of sync across services, back-up services, lend data agents, rating agencies, investors, senior lenders, etc.

And then most recently, the power and the opportunity of having everything on the blockchain is that the actual asset becomes a digital asset, a truly digital loan where it is native to the blockchain and can be very easily transacted with minimal additional friction and costs and time delays. So that's been a journey. I think we're all on something of a journey here and it's all in the relatively early stages of it, but, you know, our understanding in terms of what's required for that and what we need to be building to support the industry on that journey has evolved quite rapidly over the last couple of years on those lines.

Peter: So your solution today is a blockchain-based solution? Is that the only....why don't you tell us a little bit about the solution itself and whether it's 100% blockchain-based or what?

Charlie: Sure, so what we've been building is what we would describe as decentralized market infrastructure where the protocols for how loan characteristics should be recorded on the blockchain. It is a complex market and there are multiple characteristics that really make up a loan. The asset isn't just the original source of loan documents that's obviously critical in terms of ownership, but there's a whole host of other data sets, loan characteristics that really should be recorded on that asset, including stuff like the verification activities and so on.



So what we've been building is the protocols for how that loan information should be recorded in such a way that the industry can realize maximum value around there, recognizing that it is a multifaceted approach. It's going to take a number of years to get there and I think we'll go through a hybrid period of what might be called asset-backed tokens or loan-backed tokens where the loan remains off chain and there is a token trait associated with that loan, but that's down the road. There's a number of steps before we get there.

The first step of phase one product has been around the casual pledge activity and recording immutable record, ensuring there is solely one record of a loan being pledged to a credit facility and why we started there was very much around establishing a minimum viable ecosystem. As you're probably familiar, the ABS world is pretty concentrated, there's ten or 11 banks that are underwriting and providing the warehouse facilities for three quarters of the market so establishing that minimum viable ecosystem is relatively straightforward and we've been working with those guys and partnered with IBM from a technology point of view in building the platform for recording all of these loan characteristics, culminating with the digital asset being on the blockchain, but starting with this relatively straightforward basis around the loans that are being placed as collateral to the investment banks or senior lenders.

Peter: Right, right, okay. So I want to talk about securitization. I don't remember exactly when we met, but it's been several years ago now. You've been around the marketplace lending space for a while, what was it about this market that was...because, obviously, a loan product...what you're selling could apply to any loan, what was it about marketplace lending that attracted you to really focus there?

Charlie: Sure, so we started there and have in recent months sort of extended into other asset classes like student loans, cars, etc., but, we started there and we continue to put a lot of resource there for a couple of reasons.

Firstly, there's a lot of innovators in that world, some pioneers who are pushing the boundaries. You know, we fully expect to the innovation around blockchain to come out of that world, they're more open to new ideas and easier to work with and guys like Ron Suber and Mike Cagney pushing the envelope in terms of how things should be done.

Secondly, in terms of creating that minimum viable ecosystem, there is a nicely concentrated, relatively small asset class relative to credit cards and auto, etc. so really there are half a dozen marketplace lenders driving most of the volume and supported by half a dozen investment banks providing a lot of the initial capital and underwriting activities so it's a pretty well contained type ecosystem that works together pretty nicely.

Peter: Right, right, okay. And so then you've expanded beyond that now and you started talking with some of the banks. Now, I imagine, you've got....that's a challenging thing to do to talk to these banks because you're asking them to really change the way they're doing things. Obviously, they can recognize the benefit, but there's also the pain involved of change in the way they do it so, I imagine, it's going to be a very long lead time, but just tell us a little bit about how those conversations are going, so far.

Charlie: Sure, we've been working with majority of those big banks for some time now. So off the back of the earlier research and planning I was talking about, 2017, we ran multiple working



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groups with the big banks in terms of helping to understand those pain points and efficiency opportunities and really prioritize the roadmap and starting to introduce some of the concepts associated with the blockchain; how they might be able to help.

I think over the last 18 months, they've come a long way in terms of what ABS hasn't to date embraced with blockchain. But in recent months, I think we've seen the needle move quite considerably. In the autumn, most of the big banks brought along their blockchain strategy people to ABS East which was very encouraging. While it wasn't their first use cases, or POCs, within the banks, the majority of them now are actively engaged in terms of how can we take advantage of this technology to improve some of the inefficiencies of the ABS and MBS markets.

Peter: Right, right. So then when you look at securitization.....I was at ABS East as well and I was struck by how little has changed in securitization, given the disruption that's happened in so many other areas of sort of the broader financial ecosystem. The ABS market still seems to be doing things pretty much the same way they were doing them a decade ago, or even two decades ago, with slightly better technology.

So do you think.....you said that they're getting proof of concepts going and some of the banks are embracing this, but I just wonder if....like securitization is a massive industry, multi-trillion dollars industry, as far as total volume goes. Is the problem big enough for them to really completely transform the way they do things, say over the next five years? Tell us...maybe you can basically say what's fundamentally wrong with securitization today and how big is the pain point and then what you see as sort of where this is going to go in five years time. A lot of questions there, I know, so take your time. (laughs)

Charlie: I know, all good. I'm glad you sort of framed it in the five-year window because this is a multi-year journey, but winding back to, you know, what are the challenges, you're right, the industry structure and the underlying process and how transactions occur hasn't changed for decades. It's slow, transactions are measured in weeks, sometimes months, it's expensive, there's multiple service providers generally doing a lot of the activities pretty manually, though siloed, so there's no shared infrastructure, no shared system of record which in virtually every other asset class there is some system of records, shared infrastructure, keeping track of things and paper documents representing the underlying asset and solve the majority of use cases.

So that model and all of those inefficiencies which culminate in significant fees, which everybody has to bear some of those fees. That represents the opportunity, why the banks didn't choose as its first use case. I think that they obviously started with a lot of trading and settlement use cases where there was low hanging fruit, or there certainly appeared to be low hanging fruit, in terms of trapped liquidity, of improvements there from the blockchain, but also because I think there were existing intermediaries that could help solve a lot of those instances, where there was a DTCC, or stock exchange, or there was a party that could help facilitate that. Now I actually think that many of those early POC's struggled because of some of the performance and the scalability issues of the blockchain. Whereas ABS, despite the sort of data challenges that we have, is actually relatively low volume in terms of the volume of data and in terms of the volume of transactions, so in that regard the technology is fairly well suited to the ABS and MBS market, where their life challenges is more of a social construct and more how we as an industry organize ourselves in terms of the adoption of that technology.



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So, you know, that's a lot of what we're doing...it's around getting the right incentive structure and network effects and getting the right standards in place for the industry to be able to embrace this technology.

Peter: Okay, that makes sense. So could you give us some sense of the traction that you're getting today. I don't know if you could share names or lending platforms or banks you're working with, just give us some sense of how you're going.

Charlie: Sure, so in the context of recording the market position, we've got close to a million accounts, largely collateral associated with the digital lending market across the main seven or eight digital lenders, all of the guys you would expect. In the autumn, we extended coverage of collateral that we can record beyond the digital lending space into auto, cars, equipment, small business, student...really for the entire ABS desk.

Peter: Okay, so what's it going to take...I mean, I think this is not going to be a quick process, but I also could see a time, maybe it's five years, maybe it's ten years, we'll look back and think how the heck did we ever do it the old way. The thing that struck me, we are here in almost 2019 and we are talking about hundreds of millions, billions and billions of dollars in transactions where documents are based on paper and that to me...I mean, you're talking about words, this is not like some really complex structural architectural type stuff that really is hard to put into paper, you create a PDF for a lot of this stuff, it's not rocket science.

So it's staggering to me thatI went through the mortgage process two or three years ago with a financial institution that was totally paper-based, like 100%, they wanted me to fax things in and I said, I'm sorry, I don't have a fax machine. I'm not going to get one. I ended up ...anyway, that's a whole other story, but my point is it's amazing how broken it is, how backward not broken, how backward it is. So maybe take you can take us through, give us a picture of where you think it's going to be, whether it's five years time or ten years time, and maybe you could sort of ...what efficiencies are we going to gain?

Charlie: Sure, so I think the end stage is all of these loans being represented natively on the blockchain, such that it is the sole representation of the loan, there is no paper copy, there is no PDF, it is solely on chain with all of the underlying characteristics, the verification or the service and payment data and there's other characteristics that give that asset the sort of the certainty and the party in possession of that loan effectively has the ownership and it's as easy to transact as a cryptocurrency, as a bitcoin and there are digital asset groups at banks and other places talking about credit as a digital asset, so that asset can be traded electronically in similar fashion to equity and FX.

I think the challenge there is less of a technical one and more of a regulatory one in terms of that the loan then becomes a security and the cost and reporting is associated with being a security, which at the end of it's loan level will be challenging to bear that cost. But I would anticipate that when a loan is on the same lot..... that the ability to actually dice and slice, fractionalize and come up with new financial products in the structured credit space accordingly and leveraging smart contracts in terms of managing the payments associated with those, I think the way that loans are pooled has the potential to change dramatically. But, most importantly, the cost of actually funding and pulling together these transactions should lower



dramatically and the actual time involved in doing so should be much, much, much faster. I expect they still will generally be pooled off and those additional loans are trust-provided through the rating agencies and other parties to the larger institutional investors. But, yeah, I think the way in which those transactions occur becomes vastly more efficient and there's significant savings across the whole value chain.

Peter: Right, right. We all saw *The Big Short* or read the book, or both, where you've got Michael Burry there sitting at his computer looking at what's actually inside some of these pools of loans and seeing that they're going to be in trouble. It seems like to me when...obviously you've got the cost benefit and the transparency benefit as well, where you look at the financial crisis which, you know, had a lot to do with these mortgage-backed securities that where, you know, were way too...there's many, many reasons which I'm not going to mention here, but my point is the securitization pools, these pool of loans, when you've got them on chain, I presume this is going to be a completely transparent to anybody. This is not going to be this kind of hidden layer that has been prevalent really till now.

Charlie: Blockchain clearly has the potential to improve transparency, but I would prefix that with the appropriate access controls. I think applied appropriately it would have helped considerably in the context of the financial loan crisis. As an underpinning technology and infrastructure, it would have enabled much easier reporting and transparency if the parties involved wanted to provide that transparency and could help ensure that information wasn't misrepresented or if it was changed there was the immutable audit of any changes in the challenges around the core of verification (microphone noise) misrepresenting of income, that none of those would have been feasible, so it definitely would have had the potential as a technology to remove a lot of the risk in terms of sort of transparency with the relevant parties giving access to the other parties of that data, but it would certainly become a lot easier. I think a lot of the 2008 issues weren't necessarily that people didn't want to give access to that data, it was just very hard to actually get all of the relevant line data in front of the relevant investors. So I think as an underlying technology it would help to do that quite dramatically.

Peter: Right, right. Okay, we're running out of time, but a couple of things I want to get to. You know, I published a piece recently on what Mike Cagney is doing with Figure and Provenance..... what you're doing at GDR, how is it different and how is it similar to what the Provenance blockchain is trying to do?

Charlie: Sure, so Mike and the team are doing some great work over there and I think they share a lot of the same visions of Provenance longer term and they see some similar inefficiencies in terms of how credit is financed. We both chose to work with IBM Hyperledger, using some similar underlying technology. I think how we're tackling the opportunity is somewhat different from how they're tackling the opportunity, so we're focused on working with the group of banks as our minimum viable ecosystem and going deep on a specific use case as part of that asset characterization.

The collateral pledge activity is our phase one whereas Provenance is going end-to-end in terms of the digital asset creation partnering up with colleagues in terms of demonstrating that minimum viable ecosystem. So they're sort of tackling the opportunity in a somewhat different go-to-market way. We see this as a very much...a phased approach, multi-year to get into that sort of end state of the truly digital loans and a lot of that around creating standards and



common ways to be reporting loan information on chain, getting the incentives model right in a sort of social construct are absolutely critical.

I think we're taking a position that there still will be a requirement for many of those third party services that you see exhibiting around ABS East and elsewhere in terms of custody and trust services and legal and verification, etc. but they will evolve dramatically and can and will be a lot more efficient in this end state, but, I think, in general, the parties that we're working with, they still want an independent third party to stand behind all of these activities to see them in a much more automated, efficient way.

They don't want to hold keys to a set of digital loans in custody themselves, nor do they particularly want a startup doing that. They want a trusted custody provider, but it's probably more like a Fidelity cryptocurrency custody service in a digital, traditional warehouse of paper loan documents, so we're working with incumbents to bring them on that journey. Some of them, I'm sure, will embrace the technology and the journey and others not necessarily because to the incumbents it's not just any technology, it's a new business model and in many instances it's probably a lower price point. An automated service should be a more profitable service for them.

Peter: Right, right, okay. So last question, we are recording this on the very last day of November, as you look to 2019, what are some of the goals that you want to achieve in 2019.

Charlie: My principal goal is demonstrating this minimum viable ecosystem working. We've already shown the technology works, we've already got a number of banks using it up and running, introduction with IBM. We wanted to demonstrate real value across significant proof of banks which, you know, as I say, the ABS market is principally ten or 11 banks so we want to get a significant proportion of those actively using it across multiple asset classes at scale and for us that is the meaning of the viable ecosystem, phase one, the platforms do other interesting stuff, phase two, three, four in the coming years.

Peter: Okay, best of luck with that Charlie, it's been a pleasure chatting with you today. Thanks for coming on the show.

Charlie: As always, thanks, Peter. Cheers.

Peter: Okay, see you.

Charlie: Bye.

Peter: You know I look at the securitization markets and see processes that are unchanged for decades and extra costs and time in the system. It's just inevitable that this is going to change, market forces are going to catch up and demand a cheaper and quicker way of doing things. So I think, whether it's Global Debt Registry or Provenance or another system, I feel like it's inevitable that we are going to have a blockchain-based securitization market. It may take five years, it may take ten years, but, eventually, securitization will be unrecognizable from the way it's done today. I certainly think that will be a good thing. For most of the players involved, it certainly is going to be a more efficient system.



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

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