200th Episode of the Barefoot Innovation Podcast

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Jo Ann Barefoot: This year my colleagues and I at AIR are celebrating four big milestones. First, we are four years old. Watch for a podcast coming up with our team telling our story so far. Second, our New Mexico summer round table is turning 10 years old this year. Yes, I started hosting that six years before co-founding AIR. Third, the Barefoot Innovation Podcast turned eight in April. Yes, I also started the podcast show four years before starting AIR. And last but not least, we are marking with today's show, our 200th podcast. I recently heard an a16z podcast with Sriram Krishnan of the Good Times Show. He said that 90% of podcasts don't make it to episode 20, and of the ones that do, 90% of those don't make it to episode 40. So at 200 we are doing pretty well. It has been a ride.

To remember the 100th show we have to cast our minds back to the summer of 2019, a hot August in Washington DC. I had just co-founded AIR along with David Ehric, and that week David and I worked with our Chief of Staff, Lexi Frazier, who was already with me, and with my former Harvard Research Assistant, Amrita Vir, to put on the first ever US regulatory TechSprint. We did it in conjunction with the UK Financial Conduct Authority at the suggestion of its Innovation Director, Nick Cook. And two years later, Nick became our Chief Innovation Officer at AIR. I remember working on that 100th show in the midst of the exhausting TechSprint sitting at my desk one night long into the evening. As I said in that episode, the FCA approached us about cooperating in that TechSprint event when AIR was so new that we didn't even have a logo yet, We just had a picture of a robot.

We knew though that we were onto something. The event built on the work that the FCA had been doing in TechSprints, including one the year before that explored technology that could turn the tide on money laundering. The energy at our sprint was incredible. People were so excited wanting to sign up to help solve real problems by opening up a whole new box of tools. Six months later, COVID hit. Like everyone we locked down, learned how to use Zoom, learned how to be effective with zero personal contact. We are going to tell AIR story again in a separate show with our leadership team, but tying it to the podcast show, I think what happened was that the pandemic made the world smaller and bigger at the same time. All our shows were recorded on Zoom for about two years, plus our speaking engagements were suddenly all virtual, which made them much more international.

We took the opportunity to cast a wide net. Who did we talk with in these last 100 shows? The show's first hundred episodes, from 2015 to 2019, were heavily focused on FinTech innovation. That was the emerging force that was promising or threatening, depending on your perspective, to disrupt financial services in those years. We talked with many, many startup founders and with bankers who were importing FinTech ideas, and with regulators who were organizing themselves to learn about these new technologies. I know for sure that I was the first person to introduce some of our US regulatory agencies to the term RegTech, because they told me I was. These ideas, in the first hundred show, were mostly new to the traditional financial community, so we did a lot that was aimed at just educating. The second hundred shows, from 2019 to now, have explored how these disruptive technologies have evolved and the government response to them.

When COVID began, we pivoted to a special series with top regulatory officials, current and former, to ask how they viewed these novel pandemic risks and how to respond to them. We talked with Jelena McWilliams, Brian Brooks, Jean Ludwig, Rodney Hood, Chris Willard, our board member Tom Curry, and others. We also continued, of course, talking with the innovators who were driving market change, people like PayPal CEO Dan Schulman, Circle CEO Jeremy Allaire, Goldman Sachs' Executive Stephanie Cohen, Varo's CEO Colin Walsh, on getting a bank charter, Upgrade CEO Renaud Laplanche, Starling Bank CEO Anne Boden, Sila Founders Shamir Karkal and Angela Wilson, MasterCard Vice-chair Ann Cairns, and many, many others. We talked with Cabbage Founders, Rob Frohwein and Kathryn Petralia, before they sold to American Express. We talked with Sunrise Bank CEO, David Reiling, and we talked to Silicon Valley Bank CEO, Greg Becker, back when the horizon looked bright.

We also talked with leaders who are remolding the industry people like American Banker Association CEO, Rob Nichols, ICBA CEO, Rebeca Romero Rainey, and RegTech Association CEO, Deborah Young, and also with BIS Officials, Bank for International Settlement Officials, like Cecilia Skingsley and Tara Rice. And we talked with the social entrepreneurs. One of my favorite shows was with Gates Foundation, Kosta Peric, on transforming payments in Africa. We also talked about Africa payments challenges with Mojaloop CEO, Paula Hunter, she'll be on the show again soon. We talked with Sarah Willis Ertur of Village Capital and Allie Burns of MetLife and the Financial Health Network. We talked with Prudential's Jamie Kalamarides and Aspen's, Ida Rademacher. And we talked with Greta Bull, then the CEO of CGAP, and now leading women's initiatives at the Gates Foundation. And of course we continued talking with regulators all over the world.

We talked with many agency heads, some have now left office like FDIC Chair Jelena McWilliams, Controllers of the Currency Brian Brooks and Joseph Otting, Federal Reserve Vice Chairman Randal Quarles, Acting Head of the UK Financial Conduct Authority, Chris Willard, CFTC Chairman Chris Giancarlo, NCUA Chairman Rodney Hood, former Small Business Administration Lead Karen Mills, and many others. And we also talked with many top regulators who are currently in office, like Ravi Menon who leads the Monetary Authority of Singapore and Nikhil Rathi, CEO of the Financial Conduct Authority in the UK. And Todd Harper, Chairman of the NCUA, and also with his fellow board member, Kyle Hoffman. We talked with people who were then US State Banking Regulators as well, like New York's Linda Lacewell and Wyoming's Albert Forkner. And of course we talked with my very dear friend, the late John Ryan, CEO of the Conference of State Bank Supervisors, who passed away last year.

In that show, I said that Ryan had the distinction of being the nicest person we ever interviewed, because I had multiple failures of the recording technology talking with him, like two or three different incidents, and he was just infinitely patient and good-natured. We also talked with some people who were not leading agencies at the time but are today. For example, we talked with Michael Barr, who is now Vice-chair of the Federal Reserve, and with Adrienne Harris, who now leads the New York Department of Financial Services, about their Gates Foundation project at the time on the future of the Central Bank. And of course we talked extensively with the innovation leaders at the regulatory agencies around the world. Early in the second 100 shows, we talked with Nick Cook and his then colleague, Francesca Hopwood Road, who was at the time at the FCA, and is now at the Bank for International Settlements Innovation Hub.

Nick has identified the three part journey that most regulatory agencies travel on the road to the digital age. He says that they first organize themselves to learn about FinTech, and then they educate themselves about how the industry can use RegTech, and last they tackle the more difficult job of adopting new technology for themselves, modernizing their own tech stacks, moving into the cloud and adopting technology for supervising financial companies, so-called SupTech. We talked with people in different stages of that journey, including the FCA, FINRA, the MSRB and MAS, and again the BIS Innovation Hub in relation to the G20 Global TechSprint on RegTech in which I was a judge. Many of our guests have been partners in the work that AIR is doing. We talked with the founder of the Reserve Bank of India's Innovation Hub, Rajesh Bansal, on the TechSprint that we did with them in 2022 on women's economic empowerment.

We talked with Amy Friend, the former Chief Counsel of the OCC, about the report that she wrote for us on the innovation journey that has been traveled by the UK Financial Conduct Authority. We talked with Jerry Buckley and Sasha Leonhart on the pro bono report that they wrote for us at the Buckley Law Firm, which is now Orrick. The report was called the Financial Regulators Dilemma and was based on confidential interviews with the innovation heads of the US regulatory agencies, talking about how the government-wide laws and protocols that tie their hands in trying to learn about technology and experiment with new methods need to be revisited. They're still actually helping us with that effort. We talked with some legends also like Intuit founder Scott Cook.

Speaker 2: When the sales started taking off, people kept asking us what was the inflection point? I went back and looked at all the data and the sales actually grew by the same rate every month. There was no inflection point. What was happening was, the first users, we only sold a handful of users to start with who bought Quicken. They liked it and they told their friends, and their friends then went and bought it, and they liked it and they used it and they told their friends. It grew by word of mouth. Word of mouth. Even later when we added advertising and got in stores and all that, by far the largest driver was word of mouth. If you really want to create a phenomenon, you do something that creates such positive word of mouth. And why did the word of mouth turn out so positive? Because of that testing. Because we were so customer centric, so consumer centric, it has to be fast, it has to be faster than our alternatives, and it's got to be so easy for the total novice. And that only happened because of all the testing.

Jo Ann Barefoot: So in all these conversations, what have we learned? In the very first episode of Barefoot Innovation, I laid out the goal of the show. I said, "These podcasts are designed as a search for ideas on how to do better for financial consumers. We're seeking out better products and practices, smarter regulation, new kinds of business models and cultures, and new ways to empower consumers, and above all, new technology, which is suddenly making it both possible and necessary to rethink today's system. We're conducting our search through conversations. We're finding the most fascinating people in the field, that includes, importantly, lots of people who don't know each other, who barely even know about each other, but who are actually working on the very same challenges from different angles amidst rapid change. We listen to them mix their insights, and through the mixing, germinate new ideas. Finding new ideas is urgent because consumer financial services is the first industry to face technology driven disruption, while being both essential to everyone and massively regulated. The changes coming will be both good and bad, which means they will inevitably disrupt the regulatory system too with all its enormous complexity."

So what have we found out so far in these hundred episodes that we've most recently done? What are we learning and what lessons have stayed on my own mind for these four years? Well, if I may say so, one thing we've learned is that we were right about a whole lot. Many of our guest predictions have changed, dramatic as they may have sounded along the way, have been coming true. In fact, many have turned out to be understated, and another set of predictions have not panned out. And so here are some of my takeaways from the second hundred shows. The first is that speed is the key, from almost the start of this show, eight years ago, we've been warning that digital technology is accelerating exponentially, which will mean that the regulatory framework won't be able to keep up with it.

When we did the hundredth show, most of our vocabularies didn't even include terms that have become everyday language. We had no concept of an NFT, a Dow, Web3, DeFi, the Metaverse or GPT. If you've read AIR's paper from early 2020, the RegTech Manifesto, none of these terms even appear in it. Think about this speed. In this short span of years, we've seen a whole business cycle in the crypto space, a full boom and bust. We've seen America's first social media driven bank run, which closed down a regional bank in a matter of hours, and we see novel risk vectors like the Robinhood GameStop episode. The danger of regulators falling behind the curve is ratcheting upward, and now we have generative AI in particular coming at us so fast that it's impossible to prepare well for it. I hope you enjoyed my talk with my guest on the 199th Show, which was ChatGPT.

The speed of change was a challenge that also reached beyond technology. Our hundred and first guest was the great Chris Skinner. Four years later, the guest of the show was ChatGPT. If you had told me four years ago that the 199th conversation will be with a robot, I would not have believed you. Little did we know back then what was ahead. The early guests in these hundred shows had no idea that a global pandemic was going to seize the world, and in just a few weeks transformed daily life for almost everyone on earth all at the same time and would dominate everything for nearly two years. No one knew the US presidential election would bring unprecedented turmoil, and bitter and even violent polarization. In finance, the guests in the first half of the group from our last a hundred episodes saw the crypto boom riding high, with no idea that crypto winter lay ahead, much less the FTX disaster and Sam Bankman-Fried, or the evaporation of venture funding and failures of promising startups that ran out of runway.

The FinTech community didn't know that the arrival of the Biden administration in 2021 was going to bring senior regulators into office who were deeply suspicious of their technology and even of the word innovation. No one knew that Russia would invade Ukraine. Almost no one accurately predicted how COVID relief funding would impact household spending, borrowing and saving, and only a few voices predicted that inflation would infect the economy, or that after years of artificially low interest rates, the Fed would take us through the steepest fastest rate increase in US history. The bank regulators we talked to had no idea that Silicon Valley Bank was headed to failure. We can say that any four year period brings a lot of change, but my view is that many of these shifts reflect shortening cycles of change and new, deeper, more mold breaking kinds of change than we've ever seen before in technology, in policy and in society.

So my biggest piece of advice for everyone is speed up. It is not easy, obviously, but we've reached a point where really holding still has become more risky than moving forward. Number two, we've learned that innovation is a mixed force, both good and bad. This isn't a new learning, we always have known it, but the shows do tell the story. Some innovation will fail, some will cause harm. Technology is a tool, it's neutral, amoral. It can be used for good or ill. It can also be left unused. It's always been my view, and today more so than ever, that whether the good or the bad will dominate in financial innovation is going to depend on how wisely we regulate this change. I worry that we will fail to prevent harm and I worry even more that we will fail to reap the potential benefits by regulating these changes in ways that accidentally choke off new approaches that could have solved hard problems and could leap us forward in areas like financial inclusion, fair lending, consumer protection, anti-money laundering, economics stability, and much more.

A third lesson is that the nature, or at least the design of money itself is changing. We have crypto winter? Yes. We have seen big financial fads soar into the stratosphere and then fall back to earth. We've seen wild speculation and fortunes made and fortunes lost. We have a lot of visionaries who struggle to explain what it is that they're seeing over the horizon as they talk with us about buzzy words like DeFi and Web3. I know that I don't know the future, but I am with the voices saying that most of the shakeout is a healthy correction. People sometimes ask if FinTech and crypto are like the dot com bubble. My answer is yes, in that lots of companies won't make it, but also yes in impact.

After all, we are using the internet, aren't we? I'm going to follow up today's show with a special episode or maybe two in which we go back and listen again to parts of what some of our visionaries told us in these hundred shows about how money is going to change, and I'm going to encourage you all to join me in listening really closely because I do think they're seeing the future.

A fourth lesson is that using technology is going to drive financial inclusion and fairness. It's hard to do this, but it is happening, and the same is true also for combating financial crime. We have had so many guests who are devoting their lives to this effort, at making financial services more inclusive and fair, people at international organizations, foundations, central banks and in the private sector, both in the US and all around the world. One show focused on AIR's work with the National Bankers Association to help minority depositories stay competitive through digitization so they can carry on their mission in serving communities of color. Some guests have come from the World Bank and the Gates Foundation devoting decades of hard work to driving for complete financial inclusion by building on the incredible possibilities created by the mobile phone, which I think is the most democratizing force in the history of finance.

The mobile phone is bringing access to fair services to billions of people for whom no bank was ever planning to build and staff a branch. This work is so difficult, but it is making a difference. I think it's going to change everything, and we're going to have a follow-up show on this theme too, to listen more closely to a lot of the voices of our most inspiring guests. And the same goes for the progress against financial crime. AIR does a lot of work in this area. I've realized that our podcasts haven't told that story fully enough, but there's no question that technology innovation is starting to equip the good guys with tools that can actually fight back against rising global networks of crime. Remember, these are evils arising out of the high profitability of laundering money through the banking system and the vanishingly low risk of getting caught because the banks and law enforcement have outdated technology.

The result is rising levels of crime, like human trafficking. People all over the world are working on this, and I have no doubt that real progress is coming. Fifth, regulation is coming for the financial innovators. When FinTech was small, when crypto was tiny and obscure, policymakers could largely ignore them. Government could even afford to be patient and let these nascent trends develop a bit rather than intervening in infant markets before it was possible to understand them well. As these innovations come of age, they are naturally attracting rising attention from lawmakers and regulators. As I have argued countless times, these new technologies are breaking old molds. Yes, they're covered by other financial services rules, but that coverage is often unclear and patchy, leaving a lot of confusion and white space. Throughout the world, lawmakers and regulators are moving to change that, and now these innovations have moved from infancy to adolescents.

Everyone in this sector should be prepared for more regulation. Sixth lesson, there's a huge difference in how FinTech is viewed in the United States versus the rest of the world, and especially in emerging markets. I think it's fair to say that policymakers most everywhere are concerned about big tech in general, and about FinTech specifically, on issues like data use, privacy, security and competition. But most of the world also looks at FinTech as creating a massive chance to include everyone in the formal financial system and to drive for better affordability, transparency and fairness. We talked, for example, with the Central Bank of Kenya, the deputy governor there, Sheila M'Mbijjewe. Kenya was the cradle of mobile money. We talked with a lot of regulators in emerging countries and officials at organization like the World Bank and the Gates Foundation, who believe that digital financial services can bring actual full inclusion driven mainly again by the mobile phone, bringing financial access to everyone.

In the United States, in contrast, many public officials view FinTech innovation mainly as a negative, especially when it involves lending models that can bypass state usury laws. There's no doubt that these downside risks are real, but one theme of the show has been to try to hear from the passionate advocates of financial inclusion and consumer protection who see a historic chance that technology can solve problems we've never been able to solve before. A seventh lesson is that traditional regulation is not going to work. Yes, the principles stay the same. Yes, we need human experience and judgment more than ever. As most of you know, I'm a former regulator and I believe that the accumulated wisdom of the regulatory community is invaluable, but the fact remains that traditional regulation will increasingly fail as the system speeds up and becomes mainly about digital technology and AI. Regulators are facing increasing areas of risk that they cannot see because they don't have the tools to get information in real time and in full data sets and to analyze it with modern AI capabilities.

Some of the regulatory responses to the digital revolution are also just going to be off base. I believe, frankly, that some will do more harm than good to consumers and to regulatory goals like financial stability and combating financial crime. Why? Partly because the technology's changing faster than the rules can, more on this later, and partly also that many policymakers don't yet understand the technology issues, although that is changing fast. I also think it's partly because, frankly, too many of the founders and builders of the new challenger entities have gotten it wrong. FinTech has massive potential to make financial services better, more affordable, accessible, fair, and everything else we want, but it doesn't achieve those goals automatically. A combination of some truly bad actors and just a lot of indifference to customer's wellbeing has put the whole sector on defense. The industry is going to be working for a long time to get out of the penalty box in the minds of many consumer advocates and public officials, and it could have been avoided.

The final lesson I want to point to is that the biggest missing piece in meeting the regulatory challenge is that the regulators themselves need better technology. The regulators are very smart. At this point, there are regulatory leaders all over the world who do fully understand the technology challenge and who have elevated technology issues to the top levels of their agendas.

Only a tiny few, however, are making real progress in overhauling their own technology to meet the challenge. They're going to have to do this. We talked with some of the leaders who are taking these steps. Again, Nikhil Rathi at the FCA, the innovation heads of FINRA, the incredible Chief Innovation Officer of the Federal Reserve System, Sunayna Tuteja, leaders from the Bank for International settlements, Ravi Menon at the Monetary Authority of Singapore, and the leaders who've taken the MSRB fully into the cloud and redesigned the agency's entire information architecture around it, modernizing the regulatory information plumbing issue may not seem as sexy as offering cool new financial products, but I think it's the single most important thing we need to get right. I think it's the single factor that is most likely to go wrong as the world of finance remakes itself for the digital age. We are going to have much, much more on this in the second hundred shows. The regulators are going to need to meet fire with fire.

Our first hundred shows were full of adventures that were caused by the places where we recorded them. In episode 100 in August 2019, I shared memories of some of those crazy times – fleeing from thunderstorms, recording among noisy seagulls on the beach in Fiji, getting thrown out of more than one conference room. One way in which the second hundred have been different is that once COVID hit, we did nearly every episode on Zoom, with me just sitting at my desk in Washington DC and my guest doing the equivalent. The biggest misadventures were when someone’s dog barked or a cat jumped into the Zoom frame.

Still, woven into all these conversations is the human story — successes, failures, reversals of fortunes, journeys of change. Again, this time period saw the social and economic convulsion caused by COVID, the U.S. election of 2020, and the murder of George Floyd. And, again, it included the Russian invasion of Ukraine.

I remember the day I got a call from Stu Watkins in Prague. We had gotten to know his firm, Zenoo, early in the pandemic when we held a virtual techsprint on how banks and fintechs could use technology to get US federal rescue funds to small businesses as quickly as possible. In April 2022, Stu reached out to propose a podcast on his efforts to help protect Ukrainian refugees from human traffickers who were beginning to prey on them as they arrived at the border. Stu and others put together an identity screening process, essentially equivalent to a bank KYC review, so that refugees could verify who a person was before, say, getting into a car or accepting lodging from strangers. And this audience helped support his efforts.

Again, I'm working on another special episode that is essentially a cut and paste of some of the most thought-provoking discussions that happened in the second hundred shows. I'm organizing it not around who the guest was, but around what they talked about — the key themes. I think you'll enjoy it — at times, it's almost as if some of these guests were talking with each other. So watch for that, coming soon.

In the meantime, for today, I'm going to close by sharing a few short clips of some of the voices we've heard from over the last four years. You can come to the show notes at https://www.regulationinnovation.org for the full list of people. Before we do that, I want to say a quick thank you to one of the visionaries we've had on the show, Hummingbird Co-CEO Matt Van Buskirk. It was Matt who, in 2014, over a breakfast of huevos rancheros in a restaurant in New Mexico, told me that I should start a podcast show. I know this is hard to imagine in 2023, but nine years ago, I had never even heard a podcast, and I suspect the same was true at the time for many of you. Matt urged me to listen to the first show that had been put out by the legendary Tim Ferris, and, I got it. In a podcast, I can sit down with a guest whom my listeners will probably never meet, and I can get her or him to talk in ways that we otherwise might never hear. They can explain what they're doing, and why, and the passion that's driving them. Do you notice how, so often, we can hear that passion? And we can hear the journey — what they're figuring out, what they're learning, why it matters. And we can learn from them, and be inspired, and have their ideas and examples help us take our own journeys forward. It's such a privilege, to be able to talk with them.

So, let's hear some short clips of some of the voices of our last 100 guests. And let's start with Stu Watkins, on why he was working to use technology to protect refugees as they fled Ukraine to save their freedom, and their lives.

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Speaker 3: I was standing on the border and I was like... Actually, how much they feel? Because you could they weren't quite sure that they should get in the car. There was six men, two drivers in each car, and they were just saying, "Look, we'll give you a ride." And in any normal situation, you probably wouldn't get in that car, right? So in my mind, it started to click at that point, it started to process with, this is actually potentially dangerous. Which is why we started to try and bring as many people as we could back on the bus. But then, not surprisingly, unfortunately, two weeks ago, our volunteers on the border started to get reports of human trafficking. And you can't imagine, I can't even explain how low that is. Because you've got people fleeing at situations we can't even imagine only to be picked up and disappear, and that's basically what's happening.

Speaker 4: I think the one thing I really want to see is recognition for the potential of the technology and not in that sort of, "We like digital assets, we don't like crypto," sort of bifurcation, but a recognition that a technology is a tool and that technology is a tool that can be used for consumer harm and economic harm and market abuse, but it's a technology that could meaningfully create more efficient and orders of magnitude more transparent markets. And if we get this right, we can build a much, much more efficient and fair and inclusive global financial system.

Speaker 5: We know the regulatory environment is really driven by this conversation about consumer protection, which really is patriarchy. It should really be about empowerment.

Speaker 6: And what we've seen in the data, over the last little while, and these statistics come from our friends at Electric Capital, is that if you look back as recently as about five years ago, roughly 70% of all developer activity, all software activity in open source Web3 projects was originating from the United States. So the US had not just a lead, but a very decisive lead when it came to the technology talent that was being mobilized in this new generation of the internet. Fast-forward to where we are today, and less than 50% of the code commits to open source Web3 projects are coming from the United States. That is a very sobering decline, and it's a sobering decline that's happening quickly in real time, and in many cases as a direct consequence of regulatory uncertainty.

Speaker 7: And I sat in those organizations, so I've had big jobs in those organizations and I was paralyzed by the organization. We couldn't implement things because it was too risky to do so. So why is it and what do I think needs to change in those organizations? I think they need to try something. I think they need to actually do a project and implement something, whether that is a flanker brand, a parallel brand, a new brand on the side, or whether they implement part of their process on new technology. And they shouldn't talk about doing a project next year or the year after, they need to think short term. What could we possibly do in three months, or six months, or nine months? Anything longer than that, the world changes.

Speaker 8: What we are doing is investing in moving to the cloud, which we have now largely done. We have a data lake there, and now we are looking to make sure we have tools which are able to use that data platform as effectively as possible. So one innovation which we've rolled out to nearly half our portfolio as a supervised firms is our single viewer firm, which allows frontline supervisors to see through one portal structured and unstructured data about firms, we can then overlay on top of that analytics and risk metrics, which will help a supervisor look at a portfolio of firms and think about which are the outliers and which may need some more specific attention.

Speaker 10: Five years ago, the time to value two years... So on average it would take about two years for a Red Tech Solution to be integrated into a financial institution. Then in 2019, that had reduced to 14 months. Then in 2021, which was last year's survey, that had reduced to eight months. So we are seeing improvements on how quickly we are getting that integration and there's a range of drivers, I think, that are pushing towards that. There's very high regulatory fines, there's naturally occurring digital transformations happening within institutions, which means that there's more budget and there's more appetite. And I think lastly, it's just because there has been no logical place for people to come and do the discovery of the solutions. And through organizations like yours and mine, we are he helping to surface that to the top of the pile, so people don't have to look that far in order to be able to see from a safe place what's actually happening with technology and what might be more relevant to them.

Speaker 9: The real innovation here is the idea of tokenization that you can take any item of value, financial or real, even intangible anything of value, potential value, and you can actually represent your ownership rights over it in a digital token and put it on a blockchain or distributed ledger. That is a hugely powerful idea, a great transformative potential. And the cryptocurrency is just one form of that token.

Speaker 27: And this notion of selective disclosure is important because it could be that you could create mechanisms where regulators could get the information they want with the appropriate process. While to the world at large, the transactions and the identity of individuals is private so that it can't be exploited by malicious third parties, or by just prurient interests, or even by corporations that want to exploit that data, but they'd first have to have a more robust way of getting my permission than they do today.

Speaker 11: Maybe there will be an infrastructure bill that instead of focusing just on roads and bridges also focuses on modernizing the entire government technology infrastructure, including of course banking regulators and get us to a better place that way.

Speaker 12: The evergreen innovation that is the most value added is almost this eclectic combo of the bold and the boring. So stick with me here. I'm not going to make you watch a soap opera but stick. And what I mean by that is, in order to do those bold things, like you articulated, whether it's thinking about a CBDC or quantum or even how do we just fork it whole new engine or system versus tackling tech debt that you actually have to do a series of very boring things very consistently and in a disciplined manner.

Speaker 13: When dealing with sovereign currencies, they can't afford to fail. So you can't just run out of the gate and say, "Innovate facet, fail fast." You need to not fail. And so it doesn't concern me as much to see various countries, and including the US to date, having taken time to be fully asking all of the questions and doing their research because they need to get it right, if they're going to get it, if they're going to do it at all. And it's a pretty complex project to think about.

Speaker 14: Here's a fun fact for you. Communities have been issuing bonds, municipal bonds, for over 200 years. And over 200 years there's been a ton of change. And now our market is becoming further and further digitized. And the only change... The only constant, excuse me, in technology is change. So it's imperative that we stay on par, or ahead of the market as it transforms in order for us to stay relevant into the future as a regulator.

Speaker 15: The dollars position as the dominant global reserve currency will continue to erode over time gradually, as it has eroded over the course of my lifetime, modestly and gradually. But it's still going to be, at the time that I am carried out and laid in the ground, the dollar is still going to be the world's dominant reserve currency, and probably through my children's lifetimes. Everything, evolving and moderating somewhat, but there is not an existential threat to the dollars reserve position from the Chinese eCurrency.

Speaker 28: It has to be in the culture of the regulators to be open, not only open to new solutions, but incentivize them, listen to them, learn, touch them, see how they work and operate, get excited about them. Because that's what will bring the energy and talent that you want into the system.

Speaker 16: So one of the first things that I did when I came in was work with our office of general counsel to implement a policy that enables our staff to hold a small subset of the coins on our green list. So I just think that that's fundamental to retaining virtual currency talent in the public service arena, to be able to invest in these currencies ourselves, both for our own financial wellbeing and as an investment product, and so that we can really understand what is it that we're working with and towards. And so, just like as a banking regulator, I wasn't restricted from having a bank account. We want our entities or our staff to be able to engage with entities and with the virtual currencies themselves, we still have a disclosure and potential recusals, depending on the situation, but I just want to highlight that as something that we're trying to do to again really adapt our approach to this kind of innovative space.

Speaker 17: We are serving the most underserved communities. We are serving the communities that are the most likely to be unbanked or underbanked. If we can partner with these core providers to provide the latest and greatest technology where we can get it first instead of being last because we're small, that's going to make a difference. And so we really want to call on all of those companies to really review what your commitments are, and let's see if we can really bake that into the culture of the company, make that into a culture of the organization so that we can make a difference in the long run and it's not just an episodic press release or something we're doing for show.

Speaker 18: The goal today is to foster the next wave of innovation because 400 million Africans adults are still on bank, so we need to accelerate this movement. And the acceleration is done with this next wave of innovation, which in a word can be summarized as interoperability. So making the systems, which are typically siloes today work together between them, but also between the mobile money services and the traditional banks. And so this notion of instant payment platforms or faster payment platforms is now the next wave of innovation that we are helping drive with country and region stakeholders to deploy such platforms on a national scale, sometimes on a regional scale to interconnect all of this.

Speaker 19: My starting points, in terms of thinking about stable coins, once you identify those overall objectives, I think there's really three main, what I call architectural choices, with stable coins, there's going to be many more, but the three that I would start with are, how stable do you want stable coins to be? How interoperable do you want stable coins to be, how fungible? And how separable from the banking system, at least initially, do you want them to be?

Because once you set those choices, then the innovators can innovate and we can let that kind of take. Otherwise, we as regulators are constantly be chasing whatever the next new thing is and how do we think about it. And every week there's a new thing, it's very hard to keep up with.

Jo Ann Barefoot: Every day.

Speaker 19: We really want to... Every day. So I think we really do want to step back and say, "Well, what are the architectural considerations about what we really care about? Let's try to snap those chalk lines in place and then move from there." And I think it's really stability, interoperability and separability, are the three... There's going to be more, but I would start there.

Speaker 20: But it's up to legislators and executive forces in each country to decide what should be done. And there the world is developing in good ways and less good ways. So who knows? But I think there is power in the showcasing and say, this is what we can do if we come together and collaborate. International collaboration is hard, but I think there is more that joins us across countries and across central banks and across financial authorities because people's needs are cross border. And then we just have to update ourselves, upgrade ourselves, because it's a failure if people don't have the services they need at the time they need and with a reasonably fast execution. So we'll work on this and we'll make proposals, we are ready to take criticism. The more successful we are, the more pushbacks we'll probably get for those who doesn't want to change. But that's part of the job and you have to go back to the drawing board and keep coming back and hope for some change in the end.

Speaker 29: Changing four systems is not a simple thing, but the fact we've allowed these systems to fester in the back office to force you for 50 years and they're still there is disgusting, in this digital internet enabled cloud-based age. And that's what I see as a big difference, and also the biggest risk that the legacy leadership allows legacy systems [inaudible 00:43:44] roll over, if that carries on for another five or 10 years, I think they're going to go out of the business, they'll be acquired.

Speaker 21: It is really a win-win. And I think this is one of the reasons why I went into this space, because I could see, actually, look, venture capitalists gain if these technologies firms do well, regulators gain because they see safer and more fairer markets for the use of technology, financial institutions gain because they're effectively lowering their costs, demonstrating compliance, being more efficient. Consumers gain because, as we mentioned, trust is increasingly a technology issue, they want to on onboard faster, they want to get information quicker. So advisory firms gain because they're helping to move the needle in terms of bringing and setting up new technology. So I think we all win. And that's the great thing about this particular part of the industry.

Speaker 22: We ask three core questions. Are these cashflow data predictive of risk, to the first bare bones questions? Do they accurately enable these lenders to credit risk assess? The answer there we found was yes. Second question, are the data enabling inclusion outcomes? Are these lenders able to serve populations who otherwise would've been turned down? And there we found the answer is yes again. And a really important question for all of us, but especially on policymakers minds, do the data create a disparate impact risk? And there we evaluated the data for whether or not they proxied with protected class populations, and we found that the data that we evaluated are not in fact proxying for protected class populations. And that's a core component of a fair lending, a disparate impact analysis.

Speaker 23: There's really good quote about vaccines, and I think that this is a good parallel for us to draw here too, because a lot of what we have been doing today is treating problems but not fixing them. We've had a lot of things that we've just accepted because there wasn't a viable alternative. And I don't have the quote here, but I don't have to remember who said it so it can be added to the show notes, but they said, "I shouldn't have to point this out, but the great thing about vaccines is they don't just treat a problem, they fix a problem." Treating problems, minimizing their effects, curtailing their growth, et cetera is often important and necessary, but fixing problems is always better. In the same way that putting out a house fire is better than containing it.

Speaker 24: The payments networks that are out there right now, the global ones, don't really exist. The global payments really work by connecting up different local payment systems. The closest thing is SWIFT, but SWIFT isn't really payment system as much as it is a messaging system. And then how do payments actually flow by correspondent bank networks across the globe? And then, even when you look at it on a local level, things like ACH in the US, it's really a flat file standard that hasn't changed for 46 years. And so it's like, how would you build a modern FinTech startup on top of that? And the answer is, with great difficulty. Because there's been at least 46 years of evolution on how to do programming that has happened since ACH was first built, ACH doesn't have any of that in it. And it was state-of-the-art circa 1973.

***Note that transcripts may sometimes contain errors and that transcript timing notations do not match the posted podcast**

Speaker 30: I'm talking about both sovereign and non-sovereign digital money, and we can talk a little bit about what's called CBDC in a few minutes. But this new breakthrough is truly a dramatic breakthrough in money itself, the likes of which we haven't seen in several generations. And I'm convinced, having studied this now, both as the chair of a regulatory agency and in my own private life. And it is truly as John Cunbook says, one of those once in several generations breakthrough in what exactly is money, and of course the financial system that handles money.

Speaker 31: Common standards lead, we would say, to a common denominator or baseline for regulation. We call them minimum standards. We always want to try be above the minimum, but it leads to an even playing field for all jurisdictions. But one challenge I think that we'll always face is keeping up with innovation. Innovation can lead to greater benefits, of course and we talked about that, but authorities must always keep up with novel technologies and developments. It's a challenge now, but it's always been a challenge. If you think about, even today we've got superfast paced age of digital transformation. I like to say it's grounded in the Hegelian dialectic, which is thesis, antithesis, synthesis. But in our world we start with a set of existing regulations or standards, and then firms innovate, and then authorities must consider whether and how there's a need to re-regulate. And so regulate, innovate, re-regulate, is just a constant cycle to make sure that we're at the cutting edge of developments.

Speaker 25: Be bold and realize that the data revolution really has changed the way we should think about consumer financial regulation. We may be able to discard major portions of the workload that exists today and provides relatively little value and replace it with something that actually delivers the outcomes that we're looking for. And whether our proposal or other proposals to use this data in a more effective way, it's something that has happened, it is happening and we need the regulators to catch up with the companies themselves, in terms of their use of existing data in financial services companies, for purposes of both safety and soundness regulation, and in this case consumer financial safety regulation.

Jo Ann Barefoot: Again, watch for the extra special show still coming up. And meanwhile, thank you for coming on this journey with me and for listening to Barefoot Innovation.