

Speaker 0: Hello and welcome to this Q and A session on Disruptive innovation in association with Nico Asset Management. I'm Mark Cog and I'm joined today by Cathy Wood. She's the founder, Cio and Ceo of Arc and ARC helps to run Nico's disruptive innovation strategy that's available to investors here in the UK and in Europe more widely. So let's get things straight underway. Uh Cathy, thank you so much for joining us. First of all, could you tell us what disruptive innovation is? What, what's a good working definition?

Speaker 1: Well, from our point of view, uh disruptive innovation is going to transform the way the world works. It's technologically enabled and it meets three characteristics. One, it follows learning curves which me which are characterized by cost declines,

Speaker 1: which end up as price declines and helps proliferate new technologies. Uh Two, it uh it's these technologies uh cut across economic sectors so they build into mass market uh opportunities. They're very big ideas and

Speaker 1: uh they are launching pads for more innovation so I can give you the five major innovation platforms we see evolving now and they all meet those three characteristics. One is multi OIC sequencing. We used to call this genomic sequencing, but it's not just DNA anymore, it's RN A proteins methylation, it's complicated. So uh really going to transform health care and, and cure disease. We truly believe that

Speaker 1: uh two robotics, three energy storage for artificial intelligence and five Blockchain technology. And what's so interesting about this moment in time is those technologies are converging and creating what we are calling super exponential growth opportunities. They're going to transform the world completely during the next 5 to 10 years.

Speaker 0: Just taking one step back on that. Can you give us an example of a previous technology where to describe how it's gone through this, this this sort of cost curve as you describe it and then how other innovations cascaded off the back of it. Sure,

Speaker 1: the last time we were in a period like today where we had multiple innovations uh or innovation platforms evolving at the same time was back in the early 19 hundreds. So it was telephone, electricity

Speaker 1: and automobile. And in the early days of any technology, uh they're too expensive, they're, they can't go mass market, they're only for early adopters who are willing to go through a lot of hassle actually. Uh But now we think of all of those as mass market

Speaker 0: and the world is again with costs coming down. So I suppose a couple of questions, one does that mean long term, the future of the world is deflationary?

Speaker 1: Absolutely. Um That, that is one of our big uh themes. Uh And that is um we don't think individuals or businesses understand how deflationary the world is going to be uh for a number of reasons, both cyclical and, and secular uh having to do with these platforms.

Speaker 1: So, uh if, if I can give you a, a sense of the deflation we expect from these technologies um really has to do with the way we go about our research. Uh That's, that's what we're trying to find out. And, and we use something called rights law, which is a relative of Moore's law in the semiconductor

space.

Speaker 1: Um But when I say relative Moore's law is a function of time every 18 months, two years, twice the power same cost uh or versus uh rights law, which is a function of units. And it says for every cumulative doubling in the number of units produced by this new technology costs decline at a consistent percentage rate.

Speaker 1: So cumulative doubling is 1 to 22 to 44 to 8. And a person named Theodore Wright, a civil aeronautics engineer in the US in the early 19 hundreds. When airplanes were uh evolving, he observed this law. Uh That's why we call it rights law. Uh And if we use that law, we find that for every cumulative doubling

Speaker 1: in the number of industrial robots produced costs declined by 50%. And we're at a very low base right now, we're only at hundreds of thousands around the world. Uh So very low base will have a lot of cumulative dumplings. So that's 50%. Another provocative one. Many people are talking about artificial intelligence today.

Speaker 1: Uh And it had, it took us a while to get the right metric to use and, and measured this cumulative doubling, it has to do with computing power associated with a given amount of data.

Speaker 1: Uh And so for every cumulative doubling of that costs decline 48%. But the interesting and the interesting thing about A I is that, that cumulative doubling is occurring in less than a year's time today. So if, if you do, if you annualize it A I training costs are dropping 70% per year.

Speaker 0: But are you also then taking a bet that if costs are coming down, the revenues of the companies you invest in, will they go come down but not as much as costs? So the profits go up. How, how does that

Speaker 1: these uh these platforms will be associated with booming unit growth that will uh far surpass the decline in pricing um as prices fall units go up. Um

Speaker 1: And uh that was true in telephone, electricity and automobile and it will be true with these five platforms.

Speaker 0: But for how long, because one thing about the car industry and I mean, the states was known for the car industry, but I mean, I'd say over the last 30 years, it's these great national brands keep coming up and almost going bust. So, isn't how far out until the similar thing might happen with some of the companies that you're investing in and feeling very positive about today? Yes.

Speaker 1: Well, the auto in the internal combustion engine,

Speaker 1: uh variety of auto companies, uh that's a very mature industry to get a cumulative doubling there. Well, we just actually, we believe that global auto sales peaked in 2017 because we're moving towards uh autonomous driving ride hail first and, and autonomous uh later. And so while you and I drive our cars perhaps 4 to 5% of the day,

Speaker 1: uh Uber and soon autonomous ride hail, uh the capacity utilization of those cars will be 50 60%. Yeah,

Speaker 0: we talked a bit about disruptive innovation but I want to come back to a um what given the world you're describing? There's lots of asset managers out there that are investing in many of the same stocks that you are. So why set up a, what do you think makes it different?

Speaker 1: Actually? Uh We set it up because um what you just said is not quite true. Um If you look at the, the asset managers today uh compared to the eighties and nineties, uh there's a big difference and, and the difference has occurred because of the tech and telecom bust and even more so the 0809 meltdown.

Speaker 1: Um So what we have are large asset managers um uh becoming very benchmark sensitive. Uh So the benchmarks include the footie here, MS C I World in the US, the S and P 500 or the NASDAQ. And uh because those are uh the bogeys against which they're measured, uh they're managing close to them.

Speaker 1: Uh before that in the eighties and nineties when, when I was really um evolving in the industry, that was not the case at all what we were doing. And again, part of that time was pre computers for P pre P CS. So no Excel

Speaker 1: uh pre cell phones, we were trying to figure out how the world was going to work and we had to be very efficient. We didn't have the computing power we have today. Now you have a lot of quantitative strategies and they are all about the indexes. So if you look at ARCS uh portfolios, the, the USS portfolio, for example, um with that we manage uh on behalf of NICO Asset management.

Speaker 1: Uh it doesn't look anything like those benchmarks. We are a really good divers fier and one of the reasons I started ARC is uh in a big asset management firm uh which you find now dominated by a lot of quantitated re quantitative research. Um There is an assumption that everyone should look very much like these benchmarks and I just think that's wrong. Why, why is that wrong?

Speaker 1: Uh benchmarks are where they are because of what has happened historically,

Speaker 1: the stocks at the top of benchmarks are there because of past success. Well, if we believe as we do that the world is going to transform during the next 5 to 10 years and be almost unrecognizable. Those are the companies that are going to be disrupted for the most part. So if you want to take a good example, you, you've heard of the fangs,

Speaker 1: many people feel very safe with the fangs, right? They're big, they dominate, they're almost monopolies. You can't use that word but they're very strong. Um

Speaker 1: I don't think people understand that chat GP T could mortally wound Google or alphabet. Why? I mean, I've never enjoyed searching uh on Google. I, I'm just not a good searcher that way. I know people have gotten,

Speaker 1: um, to be expert at it, but I love chat GP T I just put in my own natural language question and it gives me the answer. Now

Speaker 1: you have to become prompt engineers. Uh And you have to really be very specific in that a ask the question other, otherwise you can get what are called hallucinations. Uh But, um, if you ask the question correctly, you'll get precise answers. It's really brilliant and no advertising so

Speaker 0: interesting. You're suggesting disruptive innovation could hit everybody that or a lot of the people that today we would say are the innovators. I mean, this the speed at which the predator

Speaker 0: becomes the pre something. So how far out do you look on companies that you're investing in? Because presumably you, I don't know, you invest in NVIDIA today in three years time, you're thinking somebody could be eating it, it and it's lunch. If, if the world is speeding up, it's very

Speaker 1: interesting. You raise NVIDIA. So

Speaker 1: our investment time horizon is five years. Um and I I can go into the methodology in, in terms of what we expect over five years. Uh Basically, we expect the enterprise value to it of the company. So enterprise value is a very conservative way of measuring because it's not just equity market cap, it's bonds as well.

Speaker 1: Uh And uh is not subject to financial engineering the way that eps is so enterprise value to. Uh we believe that our companies which are at high valuations now, primarily because they are sacrificing short term profitability and investing aggressively to capitalize on these amazing opportunities. So they're at high multiples today,

Speaker 1: high valuations we expect they will over the next five years um move or compress those valuations will compress to more like market multiples in the mid teens uh for our innovation companies. So we expect a lot of headwinds from valuation. So five years is our uh investment time horizon. And you asked a second question uh around that,

Speaker 0: I can't remember what it was at the moment. Putting me under

Speaker 1: pressure

Speaker 0: is the answer. No, but I, I think it was just that, that speed with which I mean, it was interesting as an example.

Speaker 1: So it's a very interesting and important example. When we were first doing, we, we, I I founded a in 2014 and we started doing our work on autonomous transportation back then.

Speaker 1: Um meaning driverless transportation. Uh And the uh the question back then is do we think this is going to become a reality any time soon? And uh so we tasked our first analyst, Tasha Keni uh to go out there and um and find out from innovators uh on social networks and many of them are willing to share, just like we are, we give all of our research away

Speaker 1: uh find out what is an autonomous vehicle and, and what would go inside it and how close are we to any, any kind of breakthroughs there? Tasha came back after researching again, we're doing first principal research. We are really not taking our cues from companies. We are going out there and looking for answers to our questions about innovation. Uh And she, she came back to one of our brainstorm and said,

Speaker 1: you know, this is 2014, the brains or central nervous system of an autonomous vehicle will be a GP U

Speaker 1: and my jaw dropped because I said what? Nobody knows that. Nobody knows that. And what was so interesting is back then, NVIDIA was considered nothing but a PC gaming chip company. That was it. Uh We owned it for that reason. Uh But no, and, and P CS were dropping at a double digit rate. So NVIDIA was getting hammered

Speaker 1: and we bought it on, on this split adjusted basis at \$5. Now, it's more than \$400. And, and we saw Autonomous, which again really is an artificial intelligence project way back in 2014 and no one really started talking about NVIDIA and A I until a couple of years ago.

Speaker 0: And for those that aren't technical, I I first put my hand up on it when you say GP

Speaker 1: U A graphic processing unit. So not a normal semiconductor, it was more um graphics processing units are associated with parallel computing and gaming adopted them first because gaming is very compute intensive. So parallel computing, very important to make strides there.

Speaker 1: Uh And you know A I is about pattern recognition, gaming is all about pattern recognition, so very similar. So gaming really pushed us towards this A I age faster than otherwise would have been the case.

Speaker 0: I want to explore some of those things a bit. Well, before I do, someone listening to this who might have a slightly skeptical that so that's great Cathy. But if I looked at what happened to the price of disruptive innovation in 2021 and 2022 I think

Speaker 0: very British understated. It was a very painful experience. Wasn't that, wasn't that a classic boom and bust? You know how how, how, how can we, if anyone brought in 21 or 22

Speaker 0: what, what you get out, out of your investment? Partly depends on the price at which you get in. Why would it have still made sense to have got in at the top and held on?

Speaker 1: Uh Well, uh to, first of all, let me explain what the top was um during COVID, uh the, the month before, uh we really understood how bad this was going to be the stock market, depending on the measure dropped 25 to 30% in one month. Our, our strategy dropped 46%.

Speaker 1: And I was saying, wow, this is quantitative uh you know, research determining what's happening here. But quantitative research which is powered by algorithms just like A I um

Speaker 1: wasn't looking at the context of the situation we were in all it was doing back then was looking at OK, which companies out there and now that we're going into depression uh have very little cash and are burning cash and they took some of our stocks in that one month period, down

Speaker 1: 75%.

Speaker 1: Uh And I was saying, wait a minute, this makes no sense in the world.

Speaker 1: How are we going to solve this problem?

Speaker 1: Someone's gonna have to sequence this Coronavirus. Someone's have, you will have to use synthetic biology to evolve the, the test to determine whether we have Coronavirus or not. Someone is

going to have to develop a vaccine. All of those companies are in our portfolios and they're just down 70 80% very shortsighted point of view

Speaker 1: and um the stocks coming out. So then we went into of course, a V shape recovery which we predicted innovation solves problems. Uh And they were throwing so much stimulus, they meaning fiscal and monetary authorities around the world, so much stimulus that this was going to happen much faster and we were gonna end up in a V shape,

Speaker 1: supply constrained world. Uh So we understood that our portfolios moved up 350% from uh this is the flagship uh from uh from March or April of 20 to February of 21 360%. So consider that as context, we thought it had gone too far. I was saying, you know, when no one thinks we can do anything wrong,

Speaker 1: there's something wrong and this, we're, we're going to face some problems here. So keep some powder dry. I'm on record for saying that um I had no idea we would face the worst two years of my career uh because we didn't know that the fed was going to raise interest rates 21 fold within one year's time. But the market was getting, it was sniffing that out in

Speaker 1: uh as we hit supply constraints and inflation in 21 and then it then our strategy and the entire market responded in 2022. Um we have never been through a period ever of a 21 fold increase in interest rates. That was a killer for so-called long duration strategies. Innovation is the longest duration strategy within the stock market.

Speaker 1: If you look at the bond market, which many people flocked to safety when there is something going wrong. The long bond market in the United States uh experienced the worst year last year since the 17 hundreds and it was probably true in the UK as well. Uh So uh in that environment, we would have expected a horror show and we got it.

Speaker 1: Now, we're on the other side of that. And I just told you,

Speaker 1: and you ask the question very rightly. So, deflation is the bigger risk here, not inflation. When I say risk, it's not a risk to our companies.

Speaker 1: It's, it's glorious. I mean, they thrive in a deflationary world. They'll be part of the reason there will be a deflationary world. It's a killer for mature industries back to benchmarks again. What are they populated with much more mature companies than we are? So we think we got through the worst period of my career. Um We've been basing since May of last year.

Speaker 1: You know, uh it's been very volatile, but in a, in a base that's very good. We're building AAA long base becomes a very

Speaker 1: a healthy launching point. So we're actually quite optimistic now.

Speaker 0: And as you look at the portfolio during that period. And I take your point, there's a lot of sentiment moving around, a lot of that moved by. But even within that was your portfolio overall, the companies in it, were they profitable? What, what percentage of moonshots, what percentage are making, making money and people don't appreciate it?

Speaker 1: Well,

Speaker 1: uh I would say it's half and half roughly now, what we did during that two year period is we consolidated our portfolios towards our highest conviction names.

Speaker 1: Uh And many of them were not earning money. Why they were being torn apart by the market? I just described they were presenting the greatest opportunities. So contrary to conventional wisdom, when everybody said I need cash, I need no cash burn. I need low valuation and so forth. They were selling our stocks. Uh And so we were

Speaker 1: concentrating towards our highest conviction names. We went from 58 names in February of 21 in our flagship and in the US, its um closer to 27 names. Uh might have been a little bit more than that in the US. Its just because of the Japanese um guidelines. Uh And uh we believe that our portfolio was ready to,

Speaker 1: you know, take off once we got through this horror show. Now, when I say basing, we're feeling very good about what's happening here. We're up a lot this year, but I just look at it as part of a basing process. Um I think when the Fed pivots and um

Speaker 1: it's unfortunate that the Fed has so much power. You know, we're moving into a decentralized world uh with Blockchain technology and, um Bitcoin, uh we believe is going to um uh become a, uh or give us a global monetary system which is not controlled by human beings that will be a much better world.

Speaker 0: Could I ask you that you obviously as a, you,

Speaker 0: you've focused on disruptive innovation, you're really looking to the future. But again, if I put my skeptical hat, I'd say, is there a danger? You're a bit cult like you have, you know, a lot, a lot of the companies, it could be a world leader. It's likely to become

Speaker 0: someone in the organization who's a chief futurist. What, who are the devil's advocates? You have saying this isn't gonna work. Ultimately, everyone's still gonna want a fax machine just to keep you

Speaker 1: keep it real. Uh One of the reasons we open up our research for everyone to see

Speaker 1: and for the, the companies where we believe there's a big misunderstanding, we actually put out our models and, and uh give people the opportunity to change our variables. Uh Our Tesla model, for example, you can find it on github, you can find it on our site. A dash dot com. Uh 41 variables,

Speaker 1: check them out, see if you think we're right or wrong. Uh Tesla is about a \$250 stock today. Our base case in five years is 2000. Uh look at the 41 variables if you think one of them is crazy, change it and see how it changes the price. But here's what's beautiful about Wright's Law.

Speaker 1: Um We are able to see which companies are moving down that learning curve the fastest. So to give you an example and let's use Tesla in the early days of our research on Tesla,

Speaker 1: the pushback we got and believe me, talk about devil's advocates, all of Twitter was pushing back, you know, most of Twitter, I mean, there are a lot of people saying and all of Wall Street, all of

Wall Street uh yes, in some respect. But still, you know, Goldman just uh cut its rating on,

Speaker 1: on Tesla saying well from 100 to 250 I think it's done a job for a while. Now. We've got that \$2000 target in 27. That's going to be if we're right and if autonomy and we're, if we're, if that's right, autonomous is going to happen

Speaker 1: and Tesla will be in, in the pole position. But in the early days, the the question we got from traditional Wall Street was, wait a minute, these traditional automakers, their R and D budgets run circles around Tesla sales. Tesla had very low sales volume and our point of view was yes, but those R and D budgets are focused on the internal combustion engine

Speaker 1: and human driven transportation. They are not focused on electric drive trains and autonomous travel. Uh They have not

Speaker 1: designed their own A I chip. Tesla has Tesla is taking a leaf from Apple's book. Apple was the only cell phone manufacture or designer to design it uh its own chip. The others were designing the phones but

Speaker 1: Apple saw a different world, it saw a computer in our pocket. Nokia Motorola and Erickson did not and guess who has the market today. So again, defining the market correctly and understanding that the old world is going to shift into the new world, which after 100 years of the internal combustion engine was very difficult for analysts and automakers to do

Speaker 1: uh you know, 100 years is a long time. And why would it change now? It's changing as, as the world always changes because the technology

Speaker 1: is ready and the costs are low enough and just back to your question uh earlier, the the the first one is why do we look so different and why are people so scared of what we're doing? It is because uh and, and by that, I mean,

Speaker 1: uh people more in the traditional asset management world, uh people in the more retail world and in the private world understand that the world is changing, they understand what we're doing. But the muscle memory that fund managers have from uh the tech and telecom bust and then 0809, they just don't want to go there.

Speaker 1: Uh That's why there is such a great opportunity. But,

Speaker 0: but on Tesla, why is Tesla going to be a winner? Why not one of the Chinese car companies? I mean, that, that market is huge. The Chinese are all over technology, semiconductors

Speaker 0: and just a really plain reason. I mean, sure the car took over from the horse, but everyone liked riding their own horse and everybody liked driving their own car. So why are they gonna want to hand that over to a computer even if they can?

Speaker 1: Um, do you own a Tesla? No, I think. Have you uh driven in? Yeah. So you understand, it's a if, especially if they, if your driver put the foot on the accelerator and just you took off, you understand, it is a better car, more powerful. And as a

Speaker 1: from a cost point of view, maintenance costs are 50 to 60% lower than gas powered vehicles. And that is why Hertz and all of the rental companies are now bringing on electric vehicles because they have to think very carefully about maintenance. So I think the car is selling itself last year. Uh If you look at electric vehicles, pure battery electric, not hybrid battery electric vehicle

Speaker 1: vehicles were up 60 roughly 65% last year, gas powered vehicles were down about 7% worldwide. You asked about China and electric. Um Tesla has the number one share today. Of pure battery electric vehicles. Um When you include hybrid, then Byd in China has the number one share. We don't think hybrid hybrid is two systems together and

Speaker 1: way too complicated. We think they, that will give way uh to pure battery electric. Uh So Byd is catering to the Chinese market. The Chinese auto market looks more like the US auto market. In the early 19 hundreds,

Speaker 1: hundreds of companies flooded into the space into the electric space and they're all going bankrupt. In fact, we just had a discussion on our morning meeting uh yesterday about this uh because I didn't even know one of the uh WM was the manufacturer. I had no idea it had gone bankrupt. It was considered one of the brightest stars I'm gonna say about three years ago.

Speaker 1: Uh And if you look at Neo and uh they're having to cut prices to attract demand and um they're not an at enough scale yet, whereas Tesla is Tesla can cut prices. In fact, it's leading the charge, so to speak in cutting prices. And if you look at other auto manufacturers and those who are not at scale in the uh

Speaker 1: electric vehicle space, they cannot cut their prices, they'll lose money. Uh Whereas Tesla's margins, uh you know, remember in 2019, everyone thought it was going bankrupt. Its margins are much higher than traditional auto margins today.

Speaker 0: And what about the autonomous

Speaker 0: angle to this? Because people like to be in charge of their cars.

Speaker 1: Well, you know, I think that, and I'm sure a lot of people will want to continue driving until they see the productivity and entertainment use cases of autonomous vehicles. So I would much prefer to be in the back seat, uh, working on my computer, like, starting my day,

Speaker 1: uh, and have an autonomous car, drive me then drive myself into work and that's just a preference. Um I think many young people a lot in the United States, uh the number of driver's licenses that uh 16 year olds are getting those, those are fall. Certainly they're falling in California. They may be falling nationwide now. Uh because young people, they're, they're cool with Uber and they can't afford a car anyway. So,

Speaker 1: uh and they can watch Netflix uh or whatever they want. They can play games in the back of uh of, of an Uber. So, uh a very different mindset evolving here and uh and uh and just, and, and the same is true whenever we have a change like this, a technical, a technological change like this.

Speaker 0: Now, Kelly, we are pretty much out of time, but I just want to get a final thought from you. Give us some examples

Speaker 0: and we've talked very much around the, the cars and Tesla and we've mentioned in video a bit, but if you could give us your top three predictions, it's probably a little unfair, but sort of thoughts of what some of those, perhaps those three big themes that are going

Speaker 0: perhaps we're not talking about much now, but on a 35, 10 year view, you think we're all going to be talking about? And you've got some of, you've got exposure to those in the portfolio. What, what would some of those be?

Speaker 1: Right. So I, I think if, if we're sizing the opportunity, we just talked about autonomous, if we are right, autonomous travel. And now I'm just talking about autonomous taxi platforms, Tesla, we think will be one of those. I have two

Speaker 1: uh Tesla cars, I call them robots because they're collecting data for, for Tesla every day if we're right and my cars go autonomous and I can send them out to travel around and make some money and pay off uh the cars over time. Uh If, if we're right, that opportunity, this is globally not just for Tesla is going to scale from nothing today to 8 to \$10 trillion in revenue by 2030.

Speaker 1: Now, to put some perspective on that, that's almost half of what us GDP is today. So it's a very big market and it's going to be global and it's the convergence of three of the platforms. That's why we have such super exponential growth. It's the convergence of robotics. Uh So

Speaker 1: autonomous vehicles are going to be robots, energy storage, they will be electric and artificial intelligence, they'll be powered by a I, so you've got what we call S curves. So those are exponential growth, trajectories. You've got one, feeding another, feeding another and that's how you get that kind of explosive growth.

Speaker 1: Another one that I think is not well understood mostly because investors uh really tech technology investors don't like dealing with regulatory environments. Uh but the technology that's coming into health care with sequencing and molecular diagnostic testing is going to transform health care. We believe that uh we'll be able to die

Speaker 1: diagnose cancer with liquid biopsies, which are blood tests, not invasive biopsies, blood tests uh in stage one or before as the body is setting up for cancer, just like with colorectal cancer, polyps are uh a setup. We believe that molecular diagnostic tests are going to be able to diagnose even pancreatic cancer in stage one or before.

Speaker 1: Um That, that's pretty provocative by itself. But then thanks to the convergence of um multi OIC sequencing artificial intelligence and gene editing, we believe now that we can find where the mutations in a person's genome are. Uh we will be able to reprogram those,

Speaker 1: those are programming errors. We'll be able to reprogram those mutations and cure disease. It's already happening with beta thalassemia, sickle cell disease. Att R these are rare blood diseases, but now we're seeing breakthroughs in

Speaker 1: type one diabetes. This just came out vertex uh in the last few days, type one diabetes. We're seeing breakthroughs and I don't know if you know of any Children with type one diabetes, but for, for the entire family, it is such an ordeal.

Speaker 1: Uh So and uh we and, and not just type one diabetes but type one, type two as well. So that's another one. And then the third is Blockchain technology which we haven't really talked about uh here much. Um uh we think digital wallets are going to usurp the role of traditional banks first. But we think that Blockchain technology is, is is going to present three revolutions in one.

Speaker 1: Uh The first with Bitcoin especially is a global monetary system which is a monetary revolution. First, global digital private, no government oversight rules based monetary system. The world has ever had. The second revolution is a financial services revolution.

Speaker 1: Uh And uh I describe that a little bit with digital wallets. Uh So you know what those are uh but just lending, saving, borrowing um uh we're all going to be our own agents in that world. And uh uh the asset management and portfolio management is going to transform uh completely and we're all going to be

Speaker 1: participants. And then the third revolution is the metaverse. Some people call it web three. but we call it the digital assets um Property revolution. So these are property rights for the first time in the digital world. This is a very big idea, property rights in the physical world

Speaker 1: uh that are immutable and guaranteed by law. Those are the best way to bring countries and people out of poverty. Uh We think that revolution is also going to take place in the digital world now that young people are spending more than half of their leisure time in the digital world.

Speaker 0: We have to leave it there. Thank you for joining us. Thank

Speaker 1: you.