The Economic Club of New York

114th Year
639th Meeting

Cathie Wood
CEO & Chief Investment Officer
ARK Invest

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Webinar

Moderator: Arthur B. Laffer
Founder & Chairman
Laffer Associates

Introduction

President Barbara Van Allen

Good afternoon and welcome to the 639th meeting of the Economic Club of New York in our 114th year. I'm Barbara Van Allen, President and CEO of the Club. As many of you know the Economic Club of New York is the nation's leading nonpartisan forum for discussions on economic, social and political issues. We feel our mission today is as important as ever, as we continue to bring people together as a catalyst for civil conversation and innovation.

A special welcome to members of the ECNY 2021 Class of Fellows, a select group of diverse, rising, next-gen thought leaders. As well as students joining us today from CUNY Graduate Center, Fordham University, NYU Stern School of Business and Rutgers University.

It is a pleasure for me to welcome our special guest, Cathie Wood. Cathie registered ARK Investment Management, LLC as an investment advisor with the U.S. Securities and Exchange Commission in 2014. With over 40 years of experience identifying and investing in innovation, Cathie founded ARK, focused totally on disruptive innovation, while adding new dimensions to research through an open approach that cuts across sectors, market capitalizations and geographies. Cathie believes that ARK can identify large-scale investment opportunities in the public markets, resulting from technological innovations, centered around DNA sequencing, robotics, artificial intelligence, energy storage and blockchain technology.

As Chief Investment Officer and Portfolio Manager, Cathie led the development of ARK's philosophy and investment approach and has ultimate responsibility for investment decisions.

Prior to ARK, Cathie spent 12 years at Alliance Bernstein as CIO of Global Thematic Strategies where she managed over $5 billion. Cathie joined Alliance Capital from Tupelo Capital Management, a hedge fund she co-founded which in 2000 managed approximately $800 million in global thematic strategies.

Cathie has been recognized as an influential fund manager across various outlets, including *Bloomberg*, *Fortune Magazine* and others. In 2018 Cathie launched the Duddy Innovation Institute at her alma mater Notre Dame Academy in Los Angeles. The Institute offers a challenging educational experience for young women eager to stretch their learning beyond the boundaries of traditional acquisition of knowledge while influencing a new way of thinking and learning throughout campus.

Today's program will be a conversation. And we are very fortunate to have Dr. Arthur

Laffer, Founder and Chairman of Laffer Associates as our moderator. As a result of Dr. Laffer's economic insight and influence in starting a worldwide tax-cutting movement during the 80s, many publications have named him the Father of Supply-Side Economics. He's a founding member of the Congressional Policy Advisory Board, which assisted in forming legislation for the 105th, 106th and 107th Congresses.

Arthur served as a member of President Reagan's Economic Policy Advisory Board for both of his two terms. In 1999 he was noted by *Time Magazine* as one of the century's greatest minds for his invention of the well-known Laffer Curve. He's received many awards for his economic research including two Graham and Dodd awards from the Financial Analyst Federation.

We're going to end promptly at 4:15. As a reminder, this conversation is on-the-record and we do have quite a bit of media on the line. So without further ado, Arthur, the mike is yours, sir.

Conversation with Cathie Wood

DR. ARTHUR LAFFER: Thank you. I'm just going to start, Barbara, if I may, if you don't mind, I'm not an unbiased observer. This is no Chris Wallace today. This is Arthur Laffer. Just so you know, Cathie is one of my favorite people I've been with in my whole life. She's a wonderful, terrific person, and here is a picture of the ringing of the bell in 2014 when Cathie's ARK went public. That is my picture with Cathie, and I just love her dearly. So, Cathie, I'm just going to start right off.

I'd love to have you give your overview, if you don't mind, of what your perspective is on inflation and what is the different perspective you get on inflation than you find all these other people talking about?

CATHIE WOOD: Sure. Thank you, Art. Art was my favorite professor of all time, and we've been through the mill, economies, economic cycles, investment cycles, for the last 40 years, it's been pretty amazing.

Yes, on inflation we do have a controversial call here. I think the prevailing wisdom is, we have an inflation problem. This is not transitory. I will say that the supply chain bottle necks have lasted a lot longer than I would have expected. And the latest version of that is consumers running out and buying holiday gifts, before, well before they normally would. Because of supply chain issues that might prevent them from buying presents later.

We believe that the bigger risk here is deflation. And there are three reasons for this. Two are secular, one is cyclical. The secular reasons, one is good, and one is bad. We are experiencing today the biggest uplift in innovation. We are in an innovation age the likes of which we have not seen before. The learning curves associated with the technologies that Barbara mentioned up-front, the learning curves are characterized by costs declines. And I will give you some of those.

We focus our research on Wright's Law, which is a relative of Moore's Law, but it's a function of units and not time. And so, for every cumulative doubling in the number of whole human genome sequence, costs are dropping 40%. And we're at a very low base. So, we're going to see a lot of cumulative doublings. For industrial robots, that number is 50%. For battery technology or battery pack systems, that's 28%.

When it comes to artificial intelligence, we are learning that training costs, so AI training costs, are dropping at a rate of 60% per year. So, these are massive deflationary forces. And this is disruptive innovation at its best. And most prolific really in the history of all time.

The bad form of secular deflation is associated with the creative destruction associated with disruptive innovation. Now we have seen since the tech and telecom bust and then again, maybe even more so, the '08, '09 meltdown, increased risk aversion in the traditional asset management world. And part of that was a shrinking of investment time horizons. And the demand for profits and dividends now. Which we believe, to the extent companies cater to that short-term point of view, that many companies have not invested enough in innovation and are going to be disrupted or dis-intermediated. They bought back shares to manage earnings. So, a lot of financial engineering and leveraging up, and to service that debt now, if their products are going obsolete, and we think a lot of products are going obsolete, they will have to cut prices to move these products.

The third source of deflation, which this is the most controversial, cyclical, we're looking at the behavior of businesses versus consumers since really mid-2019. In 2019 the yield curve averted and China/U.S. trade tensions got worse. Businesses became risk averse, and they stopped growing their inventories, faster than sales. They cut back on capital spending.

Then we move into the Covid crisis and they shut down. Then, of course, the government puts in place stimulus payments. The consumer saving rate hit 33% in April of last year. So, consumers went to market, really, it was to buy goods, which are only a third of total consumption. So they spent the year buying goods. They couldn't really buy services. And businesses have not been able to keep up with them.

What we think is happening now is double and triple ordering. Which will end up in, we believe, a significant inventory overhang next year. And that will be cleared by cyclical price cuts.

Now in terms of monetary policy and fiscal policy, and this is where you and I discuss and debate a lot, Art. I remember after ‘08, ‘09, I was sure that the monetary easing would unleash and fiscal policy easing, would unleash inflationary forces. And I was wrong. What had happened was, and I know you and I joust about this, but what had happened was...

DR. ARTHUR LAFFER: I was wrong too, by the way, if you had saw my piece in *The Wall Street Journal*. I made an utter ass out of myself. But at least I know it and I learned from my experience.

CATHIE WOOD: Velocity, which I know you consider only a residual, but velocity went down. So the rate at which money turns over went down. People were scared. We know from the ‘70s it is when velocity picks up and when consumers and businesses try to get ahead of price increases and interest rate increases by buying now, that we see an inflation problem building and moving into wages as well.

We are at a very important moment right now. Velocity has stabilized. It’s ticked down in recent months. And I believe it will continue to tick down. Because what I just gave you was a deflation story, a secular deflation story, which, if we’re right, at how powerful this story is, will mean that velocity will continue to fall. Because prices are going to fall. Interest rates are falling. I think interest rates, you asked me the other day why I thought real yields were negative, 10-year yields are negative.

Do we really believe real GDP growth is going to be down, negative for the next ten years. I think there's a lot of mis-measurement right now taking place in the nominal GDP accounts. And if we're right, these statistics, having been born in the industrial age, do not account for the digital age. So that probably means that real GDP growth is higher and inflation lower, but it's very confusing. I will give you that. Because the markets are contradicting each other.

DR. ARTHUR LAFFER: Thank you. This is very lucid and the way you explain it Cathie is great. I'm not sure I'm fully onboard. But that's because I'm really old, I drool, I do all that, but really seriously, it's a very interesting way of looking at the world and I really am pleased with the way...and that leads me to one question I really think people would love to know is. And you get criticized for it, and I don't think correctly. But go ahead, explain why you don't control for risk. A lot of people talk about risk. That you've had a bad day here or a bad day, and you've had a bad run, but that's not what you do. Go ahead, explain that, would you?

CATHIE WOOD: Sure. Well, our focus is solely on disruptive innovation. We are not a generalist portfolio team. We are focused on the five platforms, innovation platforms, and 14 underlying technologies. Our analysts' responsibilities are broken out by those technologies. They are specialists when it comes to the technologies and generalists when it comes to the sectors.

But we're focused only on disruptive innovation. We have a study up on our site, which would suggest that because most asset allocators are short innovation in the public equity markets, that if they were to include our portfolio, let's say our flagship portfolio, perhaps 10% of their equity allocation to our flagship, and then if they were to use the benchmarks for value and growth, over a five-year period and we did this study based on facts, our own experience, over a five-year period our strategy would increase returns and lower risk because the correlation of our returns with other strategies is very, very low.

That's the primary reason. We depend on asset allocators, advisors, to allocate as much or as little to our strategy. One thing I will say is given the massive amount of innovation taking place right now, that is going to be highly disruptive, we do not believe that most asset allocators have enough allocated to innovation.

And I think that the traditional benchmarks talk about risk because of these innovation platforms, DNA sequencing, or robotics, energy storage, artificial intelligence, blockchain technologies. Because those are going to rip through the traditional world order and disturb it mightily, that those benchmarks are probably where we're seeing the bubble today. I know what I find so interesting about movements in the market today, is the fear of interest rates and inflation picking up really started in February of this year, as people were getting vaccinated.

The markets went after our strategy to express the risk. And basically shorted our strategy. What I find so interesting about this is that the markets multiple, broad-based market, so S&P's multiple, on next year's earnings, is at 24 times. Nasdaq is at 31 times. These are near record highs, except for the tech and telecom bubble. If inflation is really the risk out there, why isn't the entire markets multiple coming down.
I remember when I started in the business, late '70s, early '80s, Art introducing me to Capital Group on the West Coast, and I'll be forever grateful. Back then, I think by the end of the bear market in 1982, the markets multiple was down to 6. I just mentioned that we're up to 24 on that basis right now.

Now, you're going after multiples in our space, and what has happened, the depreciation in our stocks from mid-February to today, has not done anything to our forecast. We're now just getting our companies and our stocks at lower prices. So, in mid-February this year, as we did our five-year forecast, and we assume massive multiple compression during the next five years, to something like FANG multiples. EV to EBITA in the 18 to 20 range. When we did that in February at the peak of our strategy, the compound annual rate of return we expected from our portfolios was roughly 15%.

Today, doing that analysis some of our projections have increased. The compound annual rate of return we are expecting is close to 40%. So in February we're expecting a doubling over five years. Today we're expecting nearly a quintupling over five years.

DR. ARTHUR LAFFER: Can I tell them a little bit of personal experience with you Cathie. As you know, I've grilled you over the years on your picks. You now publish them right along with everything you buy and sell. But I can't tell you, I got in Lumina, NVIDIA, Bluebird, Tesla, all of these back in the early days because of you. I didn't even know how to pronounce the names. You know, when I look now retroactively just how amazing you were in doing what you did back then.

Can I ask you, just sort of, where are you looking at the markets, with all of your platforms. I think it's five platforms you do. What are the areas you really think are big winners coming forward and what are the losers? By the way, I don't want you to mention Biden in the loser category. That's my job. Just joking.

CATHIE WOOD: So, I think the platform that has been hit the hardest in this correction is the genomic revolution. And the reason is, many of these companies are losing money. This is a movement in it's infancy. And I think the most exciting thing is, we can now isolate mutations in and among our 6 billion bits of code in our genome. So, 3 billion base pairs, so 6 billion bits of code.

Until recently, we could not isolate those mutations. Mutations are the earliest manifestation of disease. And now, what we're beginning to understand is the convergence between and among DNA sequencing, artificial intelligence and risk for gene editing as well as other gene therapies, is curing disease. We have functional cures now for beta thalassemia, sickle cell disease, ATTR, now these are blood related diseases. But the companies involved are now focusing on some of the most complicated diseases like diabetes.

And what we're learning from companies like Freenome, which is a private company focused on the convergence of AI and DNA sequencing. We're learning that the body sets up for disease. And that artificial intelligence is able to discern when that setup is taking place.

Wouldn't it be wonderful to discover cancer in Phase 1 or Stage I. Or maybe even before. Before it starts. Before the cells start replicating. The genomic revolution fund that we run has been hit very, very hard this year. Now it had a magnificent last year, up

180%. I think it's down 35% this year. And we're probably more excited about that opportunity in terms of how it's going to transform lives, than any of our others.

I will say that the autonomous taxi platforms or networks that we see evolving during the next five years, we believe that the revenue generation from those platforms and this is going to be winner take most. It will submit to natural geographic monopolies. But the winners will be tapping into a market that we calculate in the year 2030 will be $10 trillion in revenue, from zero today. That's pretty exciting. That will be incredibly transformative.

DR. ARTHUR LAFFER: Now what area is this, Cathie?

CATHIE WOOD: Tesla, this is where Tesla is going. A lot of investors are now beginning to understand how profound the changes are in the transportation space, moving from internal combustion engine to electric. So, investors are now getting that. For a long time, they poo pooed the idea. As did auto companies. Now everyone's on board. Tesla's next big move is autonomous technology. So, full self-driving cars. And we believe it will host a fleet. And if you look at their cars they haven't really changed in their design since the beginning. And I think it's because these robotaxis are going to be commoditized, right. Move from point A to point B as safely and quickly as possible, on or in a robotaxi. We're not going to be too picky about the design. And we think that

Tesla will get the lion's share of that market in the United States.

DR. ARTHUR LAFFER: Now, can I ask you. Let me go through...you've laid out all of this stuff very clear. I can remember when I looked at Tesla, and you asked me what it really was, and I was just been parroting you, this is a technology company, this is not a car company. A car happens to be the first application. The battery is the real operation. I remember that, way back when, goodness gracious.

But when I look at you and I look at what you do with ARK, and I just want to make sure the audience understands that I'm not an unbiased observer, I'm wholly on Team Cathie, just so you all know.

But the difference between you and general money managers is so profound that I'd love to have you just take a shot at it, and maybe I'll just add to it at the end. If you just describe how you're different from them.

CATHIE WOOD: A couple of ways. And I'll start with research. Our research team of 11, soon to be 12 people is as I mentioned earlier, their responsibilities are broken out...

DR. ARTHUR LAFFER: Did you say, 11 or 12 people?

CATHIE WOOD: On the research team.

DR. ARTHUR LAFFER: Is that all you have?

CATHIE WOOD: Yeah.

DR. ARTHUR LAFFER: No, I'm teasing. You've really got it focused. And people need to realize this is not the Harvard faculty, these are people who are really focusing on the research and the technology.

CATHIE WOOD: And I'm so relieved that I don't have to care about General Mills or Exxon or all of these companies which might be very good companies, but our focus on innovation which has been denigrated in the public equity markets, I think, is a big difference. The firms difference in the way we've set up our research department, our team. And I think any research team, any investment management firm that wants to capitalize on innovation is going to have to reorganize its research departments because of the...first of all technology is permeating every sector, and then, the convergences between and among the platforms and the technologies that we spend all of our time researching, those convergences are going to cause explosive growth. Because it's one S curve feeding another S curve feeding another S curve.

So, to give you an example of that. Autonomous taxi networks involve three of our platforms; robots, autonomous vehicles are robots, energy storage, total cost of ownership for electric vehicles today is less than that for gas-powered vehicles, and artificial intelligence. That is what will power.

Think about those, each of those is on a learning curve and you put them altogether and the growth rates are going to be truly explosive. I don't think people understand that. And that's because they typically have one year or 18-month investment time horizons.

Now, the differences between linear growth, which is what they are typically looking at, and exponential growth, which is all we look at, in the early years, when you see those two lines, they don't look too different from one another. But if you add another three years, it's night and day. That's why I think a lot of investment teams are missing the magnitude of these opportunities.

I would say that. And I would say our long-term time horizon, five years, critical to differentiating our strategies from other strategies. And we're not afraid to be concentrated, I mean, really concentrated. What we do during corrections like the one we've been in for the last 9 months is we concentrate our portfolio to our highest conviction names, while other investment teams typically during a risk-off period are diversifying to get closer to their benchmarks. Now, if you look at the Nasdaq, our overlap with the Nasdaq, our flagship fund, you think it'd be a lot, right. It's only 3%. And we're not afraid to be that far away from a benchmark. Whereas I find most portfolio managers are very benchmark sensitive. And I understand it's because their clients, especially in the institutional space, are measuring them against that benchmark and don't want to see much of a tracking error but do want to see alpha.

We're very straightforward. We're not hugging any benchmark. The screen for our portfolio is not a benchmark. I don't pay attention to benchmarks. The screen is our research. Our research, which is, we've added new dimensions to research and I think this is the other big differentiator relative to other firms. We have an open-source research ecosystem, through which we share our research. We give our research away for free. We give it all away for free. And many people think that's kind of crazy. It's not crazy today.

When I first started in the business information was dear. It was very expensive to get and very difficult to get. Today, information is prolific, and it's critical thinking in how you put all of the pieces together that determines the outcome.

So, we are pushing our research out because we want to engage with and become a part of the communities we're researching. I think if you look at the blockchain community, many people in the blockchain world think we're a research house. And they are quite willing to speak with us because we're presenting, we're sizing how big we think these markets ultimately will be. What the unit economics will be. What the competitive dynamics are going to be, and this is something that innovators who are heads down working as quickly as they can, they are grateful for this, and they want us to be right. So they battle test our assumptions for us.

I don't think any other compliance team that I know of is allowing their portfolio managers and analysts to say anything on social networks, Twitter and so forth. And one last thing. For our most controversial stocks, we will put our models up on GitHub, so our Tesla model is up there. And again, it's a way for us to battle test our assumptions. We've got a lot of people who are not too pleased with how we conduct ourselves out there, meaning, we seem a little renegade. So they're quick to tell us where we are wrong, and we like that criticism, as well.

DR. ARTHUR LAFFER: Let me just say, if I can summarize a little bit, having been a finance professor from the University of Chicago, Stanford, and then USC. You are the un-Chicago person, not the anti-Chicago, but the un-Chicago. They look at the financial statements, they look at the cashflows, the balance sheets, the income statements and all of that, and the covariances of stock prices, and that's how they select. You go down to really the base of the technology, the products that are involved, it's totally orthogonal with anything that the finance people do. When I look at money managers I find people who are good at breaking down balance sheets, income statements, cashflows, all of that stuff. You're not worried about that stuff. You go right down to the technology in the base, which is what I love about what you do.

CATHIE WOOD: So, thank you, Art. Actually we do start from the top down, with a white sheet of paper. First principles research on these technologies, and where they're going. We do, bottom-up models, but they're annual models. And you be surprised, we listen to almost every earnings call, because there are clues in there for us. And one of the clues is when we see that analysts from other firms are not asking the questions that we are asking. Then we know what we're investing in is not in the market. And that's very useful.

DR. ARTHUR LAFFER: I believe you totally. Because I think a lot of what you do is not in the market. And I have personal experience from the investments you've put me in. Now there's one thing I really want to be critical of, if I can be Chris Wallace for a second. You showed great wisdom, great insight, great perseverance, great understanding of economics moving from New York. But then, you chose Florida instead of Tennessee. What is wrong with you, Cathie? I mean, why can't you figure out what is just straight up and down. Tell them what you did there? I think it's the same thing I did from California, moving here to Tennessee, but tell them why you did it and how much difference that makes?

CATHIE WOOD: So, we understood that in the beginning of 2019 I said to our team, look, I have seen many asset management firms really stop growing somewhere in the $10 to $50 AUM range. And I said I don't want to end up there. We need to innovate and re-innovate and get out of our comfort zone. And to your point, the Laffer Curve, the tax rates in New York, especially after Covid, have escalated enormously. I mean, prohibitively.

And the security of New York City, especially in the area where we were. We were in a gentrifying area, the security wasn't as fiduciary, it wasn't what I wanted it to be. And so, we said, okay, let's shake things up a bit. And we had the team look at, team, meaning the extended team, you know, pick what are the cities you want us to investigate and then we went and visited them. St. Pete seemed to need us the most. Meaning from an innovation point of view. Florida, it seems to me is all about innovation. Jeff Vinik has restored Tampa. Jeff Vinik...

DR. ARTHUR LAFFER: Just for the people here, Jeff Vinik of Fidelity fame.

CATHIE WOOD: Fidelity fame. I think he took over from Peter Lynch. Yes. And so, he and the Bill and Melinda Gates Foundation have turned Water Street into a bustling area, a thriving area. It's also a very young area. St. Pete is across the bridge and it has the lifestyle. It has the restaurants, the museums, a lot of art is taking place in St. Pete, but it needs to be built up commercially. And they really felt, and we felt too, that we could serve as perhaps a beacon for St. Pete, in terms of bringing along other technology companies. And, between Tampa and St. Pete, I really believe we could turn into the next Austin, which, of course, has South by Southwest, and which is a festival, a huge amount of music and cultural activities, but also tech companies doing TED Talks and so forth. We're looking at the possibilities there.

DR. ARTHUR LAFFER: And you love it there. You love it in Tampa as well. It's just a lovely area. Back, 15, 20 years, it was the retirement center of the world. You go from Naples all the way up through Venice and Clearwater and then up into Tampa and all that. That was the retirement center. It is the anteroom of Heaven or something.

CATHIE WOOD: As I was growing up I said I will never move to Florida because that's exactly what I thought. And here I am, and I think what has struck all of us is how young St. Pete is, it's vibrant, it's young. And you know, we have four championship teams in the Tampa Bay area, the Rays, the Lightning, the Bucks, and the Rowdies, they're a soccer team. It's attracting a lot of people.

DR. ARTHUR LAFFER: You still didn't answer my question. But I'll let that go. Why not to Nashville Tennessee? We're young, hip, just look at me. I mean, I'm young, hip, I'm out dancing in the street. Jolly gee, it's just the best. But that's great, Cathie. I want to mention something. You mentioned the Duddy Institute, and just your maiden name was Duddy if I remember correctly. It was Cathie Duddy. In fact it took me quite a while to get Wood in there. And also, just the Irish aspect of your life. Your mom and dad both came from Ireland. You were the first in your family born in America?

CATHIE WOOD: Yes.

DR. ARTHUR LAFFER: You were the first and if you look at your face, as everyone can do right now, you can see the whole map of Ireland just sitting right there in front of us. What's it like, the background you came, and USC, and all of that. How did that prepare you to do what you're doing right now? And how are you so strong in facing all of the criticism, all of the pressure? I mean, when I went through all of that back in the late 70s and early 80s it was just horrendous pressure. You're under enormous pressure all of the time. How do you handle it?

CATHIE WOOD: Well, first, my parents, you know, education, career, education, career. Particularly my father. So that was first. And then, of course, I met you at USC, Art, and I think you remember this, but I was so captivated with what you were teaching, economics, but you would pull us into what was going on politically, and geopolitically. And we learned about currencies through the lens of geopolitics and terms of trade and you really taught us to view or to understand any new economic development through the three major theoretical frameworks at the time, Keynesianism, monetarism and supply side/Austrian and it was fascinating for me. Just fascinating. I fell in love with it. And you got me my start at Capital Group. And I'll be forever grateful for that because Capital, and I say this all of the time, Capital, my first project there was to work with a team on Hong Kong 1997. This was 1977. That was going to be 20 years later. I said, I want to be in this business, the world is our oyster.

We get into the business, the first 20 years, beautiful, and then post-tech and telecom bust in '08, '09. We're 180˚ the opposite. Very short-term time horizons. Very risk averse. And not enough original research. A lot of quantitative research, but that's all about the holy benchmark. The Holy Grail. And I think there's way too much, there are way too many assets allocated to benchmarks which are backwards looking.

It's interesting, when I first tried to explain to someone not in our business why I wanted to start ARK, and I got through the explanation and he said, oh, I get it. The future of investing is investing in the future. And I said, yes. Yes. And I still think these benchmarks, which are, again, they're going into overdrive because we've got a virtuous cycle, no one wants our stocks on their books at the end of the year. They want these big benchmark stocks. We are at our best during that kind of movement because we have the best research on innovation in the world, and I know the returns that we will generate for our clients over the next five years, if our research is right, are going to be spectacular.

And many people do say, well wait a minute, you're a thematic investor, which I don't like that, I really don't like that nomenclature. But, you know, usually thematic investors are too early. And then, you can, for five years, cause all kinds of devastation in portfolios. But that's not true if you're using Wright's Law. So, Wright's Law for every cumulative doubling of the number of units produced, costs decline at a consistent percentage rate. And we're able to tell if we're on track or not.

DR. ARTHUR LAFFER: Can I get you to shout out your team a little bit and tell us about who's on your team and what they do and what their backgrounds are? I've just been impressed, when I come to your office and we have the whole team around us, it's just a wild and crazy, screaming wonderful match of ideas just popping up. It really is. It used to be like the seminars at the University of Chicago on trade or money or on trade theory. It was just spectacular. Describe some of your people and what you do with them and who they are?

CATHIE WOOD: Yeah, but before I do that, I have to say the biggest surprise as I was starting ARK and describing to you what I was going to do, is that you knew so much already about innovation. You turned me on to *The Emperor of All Maladies* I believe. The biography of cancer. And just how we're going to change our thinking about cancer. But in terms of our team. So Brett Winton is our Director of Research. He was at Alliance Bernstein with me. He was the lead analyst on our research on strategic change team. MIT, engineer by training. Educator. He became experienced in startup business development. So, a great person to lead the team. And then most of the analysts have come to us, none of them have come to us from the financial services industry. They've come from either schools with domain expertise. This is a little bit the Bernstein way of thinking about things. You know, Bernstein used to say, we can teach a rocket scientist how to read financial statements. It's very hard to teach MBA's rocket science. And the same is true with genomics, and artificial intelligence. These technologies are becoming very complex.

Our analysts have domain expertise. They've either just come from college with an advanced degree. We just hired our third genomics analyst at Texas A&M. He got his PhD in plant biology. So, our genomic expertise, I think, is the best in the financial world.

And then, we also bring people in from industry. So another one of our genomics analysts, Ali Urman. She spent time at Memorial Sloan Kettering conducting cancer trials. She went to IBM Watson to learn more about artificial intelligence and realized she needed to go to MIT to do that. So she has that. She's very well versed in this convergence between DNA sequencing, artificial intelligence, CRISPR gene editing, and other gene therapies.

We've got one analyst who, she worked for an auto-consulting company. So that was the old world. She was our first analyst. And she had been an intern at Alliance Bernstein, which is when we identified that she was very versatile and would be able to apply her mathematics degree and her quantitative skills to disruptive innovation.

DR. ARTHUR LAFFER: Fantastic. And what are your dreams for the future coming? I think we're coming close to the end of our session. Am I right, Barbara?

PRESIDENT BARBARA VAN ALLEN: We are, but we'll take that dream.

DR. ARTHUR LAFFER: I want to hear Cathie's dream. It's been so amazing to be on the ride, and Cathie thank you for allowing me to be on the ride of the Cathie train. It's just been wonderful. I don't know if people know, but I own a little bit of ARK, just a little tiny slice, but it's a lovely piece. Thank you, Cathie. What's your dream for the future?

CATHIE WOOD: Well, let me just give you some numbers here. Last year, truly disruptive innovation was valued in the marketplace at $14 trillion. This year it has dropped to roughly $10 trillion. So roughly 10% of the global market cap. We believe that $10 trillion will scale to $200 trillion in the next 10 years. And what that tells you, is there will be a lot of disruption. The traditional world order, the traditional benchmarks will be, we think, harmed, pretty significantly.

My other dream, so we want to bring people along for the ride. We want to get investors on the right side of change. But the other dream is, I started an Innovation Foundation to teach schools from toddlers through high school. They renamed it the Duddy Innovation Center, that's the high school. That was the first stage. The second stage is now going down into toddlers, through high school, education through the lens of innovation. Because we're not getting enough of that in the school system. I have three educators now developing the curriculum for roughly the last year. So, hoping to launch in the Fall of '23.

PRESIDENT BARBARA VAN ALLEN: Well, many thanks to you both. This was just terrific. A fascinating conversation, and just wonderful.

DR. ARTHUR LAFFER: I wasn't too tough on her, was I? Just joking Barbara.

PRESIDENT BARBARA VAN ALLEN: Cathie, thank you. We'd like to bring you back here but we don't want to wait five years. We'll get you sooner.

We have one more webinar lined up this year. I just want to mention, tomorrow at 4 p.m. we have Dr. Mary Schmidt Campbell, who is President of Spelman College, and she, together with Dr. David Thomas, President of Morehouse College, will be in a conversation with Charles Phillips, a member of our board, talking about the next generation of Black entrepreneurs. And of course, they, in their roles at these two top historically Black colleges play a major role in that. So, that will be a great conversation tomorrow.

For ‘22, we already have a few events confirmed. Nancy Sims President and CEO of the Toigo Foundation, February 10th. Michael Saylor, Chairman and CEO of MicroStrategy March 14th, and then Thasunda Brown Duckett, the President and CEO of TIAA on April 11th. We’re working to confirm some additional prominent speakers. Ray Dalio, Henry Kissinger, Eric Schmidt, are conversations that we’re in right now, so we hope we’ll be able to secure those dates and get them to you.

If you joined as a guest, today, and you’d like to learn more about membership, please email the Club at the address on the screen. And finally, I want to take a moment to recognize those of our 343 members of the Centennial Society joining us today, as their contributions continue to be the financial backbone of support for our Club and enable us to offer our wonderful programming now and into the future.

So, thank you everyone. Again, thank you both. And for everyone here, please stay healthy and safe. And we hope to see you tomorrow at our next event.