The Economic Club of New York

115th Year
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Ray Dalio
Founder, Co-Chairman and Co-CIO
Bridgewater Associates

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Webinar

Moderator: Alan Murray
CEO Fortune

Introduction

President Barbara Van Allen

Good morning and welcome to the 641st meeting of The Economic Club of New York. I'm Barbara Van Allen, President and CEO of the Club. I'm pleased to be here with all of you as we kick off our 2022 series of events in what is our 115th Club anniversary. So this will be an exciting year with much to come.

The Economic Club of New York is the nation's leading nonpartisan forum for discussions on economic, social and political issues. And I wanted to start this morning by welcoming our students who have joined us from CUNY Graduate Center, Medgar Evers College, Fordham University, the NYU Stern School of Business and Rutgers University.

It's a real pleasure for me to welcome back our special guest today, Ray Dalio. Ray is the founder, Co-Chief Investment Officer, and Co-Chairman of Bridgewater Associates, a global asset manager and leader in institutional portfolio management as well as the largest hedge fund in the world. Since starting Bridgewater Associates out of his two-bedroom apartment in New York in 1975, Ray has grown the firm into one of the most important private companies in the country according to *Fortune.* His new book, *The Principles for Understanding the Changing World Order,* is a practical guide for

understanding both today and anticipating the future based on the patterns and cause-effect relationships of the past 500 years.

Today's program will be a conversation for which we are fortunate to have Alan Murray, Club member and President and CEO of *Fortune*, as our moderator. For the event, we'll be using our chat box so you can enter questions directly into the chat box for consideration and Alan will try to use some of those toward the end of the hour. We're going to end promptly at 9:00 am as we always do for our early morning meetings. And as a reminder, this conversation is on the record, and we do have plenty of media on the line. Without further ado, Alan, I'm going to turn it over to you.

Conversation with Ray Dalio

ALAN MURRAY: Thanks so much, Barbara, for that introduction, And, as you said, we all know Ray Dalio for establishing the incredibly successful hedge fund Bridgewater, but more recently he's become a historian. I would say amateur historian, except he approaches the topic with such ferocity that I think the word amateur is inappropriate. He's written a fascinating book, *The Changing World Order*. It looks at 500 years of human history and tries to discern patterns and then use those patterns to shed some light on the future. I've read it. I recommend it. But I have to say, Ray, I also found it more than a little disconcerting. What it has to say about our financial health, our

political health, our geopolitical health is all pretty disturbing, and I'd like us to dive into all of that this morning.

But before I do that, Ray, I want to let our audience know you've contracted the Omicron virus. We hope you recover quickly, but we really thank you for being here in spite of your illness.

RAY DALIO: It's not bad at all. I'm happy to be here. Thank you for having me.

ALAN MURRAY: I hope we can all say the same thing, because it sounds like sooner or later we're all probably going to get it. I'd like to start – before we dive into some of the details – I'd like to start by getting you to describe your historical method. You really do a deep dive into the patterns of history. You do some extensive data analysis to support it. Could you explain, it's unique as far as I know, could you explain how you do it?

RAY DALIO: Well, you know, I started as an investor young and I learned a lot of experiences, and one of the things I learned was the things that surprised me most were the things that didn't happen in my lifetime before. I remember I was clerking on the floor of the New York Stock Exchange in 1971 – this is the first time it happened – and I followed the markets and on August 15, President Nixon got on the television and basically defaulted in saying that the money that you had would not be exchanged for

gold. And I figured, wow, that's a big crisis.

And I went back on the floor of the exchange the next morning and I thought the stock market was going to go down a lot and the stock market went up a lot, the most in a couple of decades. And I didn't understand why, and I then studied history. When were there devaluations? I didn't understand how devaluations would affect prices and so on. And I found that the exact same thing happened on March 5, 1933 when President Roosevelt did the same thing, but on the radio. And I found it had the same effect and I understood the mechanics. So I'm very much inclined to want to understand the mechanics of things, particularly of things that never happened in my lifetime before. And so by studying the Great Depression, I was able to anticipate the 2008 financial crisis. So I always have that instinct.

And so this time there are three things that are happening in our now that didn't happen in our lifetime. And I like to see many cases, the same things, and I like to see the numbers, because numbers produce objectivity. I need objectivity and I need numbers to measure things in order to create my cause-effect relationship understandings. So I needed to study the rises and declines of reserve currencies. I needed to see the three things, how they happened before. And we think that 500 years is a long time but, you know, empires, all empires have risen and declined for reasons, and to understand those and their big moves, I needed to get some cycles and that's why I started 500

years ago. And being objective through the measurements so I could see the charts and I could see the cause-effect relationships, is the way I do that.

I did, before that, a book called, and it was a study, like this one was a study converted into a book, that was *The Principles for Understanding Big Debt Crises.* And I looked at 100 of the big debt crises going back, excuse me, all the big debt crises going back 100 years to see the patterns and I'd find the archetypical one and then I would look at how each one differentiated from that and then explain those differences, and then I would understand how they would work. Like a doctor seeing many cases. So that's my approach.

ALAN MURRAY: Yes, and it's unearthed so many interesting things about our financial, political, geopolitical natural life. But I want to start with the financial since you already referred to it. We are certainly living in a time like no other, extraordinary levels of debt. We saw yesterday, 7% on inflation, and yet money still appears to be, money still is incredibly cheap. I can get a mortgage for under 3%, in the face of 7% inflation is unprecedented. Tell us what your patterns uncovered that can help us think about where this leads.

RAY DALIO: Yes, thank you for asking that. There are three things that are interrelated and in order to answer it, I can't completely separate them. But those three things that

never happened in the degree that they are happening now and happened in the 30s was the one that you were pointing out, the creation of that magnitude of debt and the debt monetization. That's the first. The second is the amount of internal conflict, particularly polarity about the wealth gap and how to distribute that and the political situation we're in. They certainly affect the other. And then the third is the rise of a great power to challenge the existing great power, the rise of China to challenge the United States. And the last time those things happened was in the 1930 - '45 period to the degree that they're happening now. And then I found that they happened many times.

And I'm just a mechanic, meaning I just, if this moves, how does that affect that? So I'm going to answer your question the way that that works in terms of, okay. So there's a bigger debt cycle, debt burden or debt service burden cycle and as a result since 1980, every cyclical peak and every cyclical trough in interest rates was below the one before it. And then there was the hitting of zero interest rates and then every quantitative easing was greater than the one before it. In other words, there's a mechanical need, if you follow the flows of funds, following the money is the way you can see the mechanics of this. And that then carries over.

So I would describe it as there are three phases in monetary policy. Phase 1 is interest rate movements, cost of money. Then when you hit zero, you can't lower interest rates. Always each one of those movements of increasing money and credit produces

demand to get it out of the downturn. You can't do that when you hit zero.

So then there's monetary policy-2 or what we call quantitative easing in which central banks come in and buy financial assets, mostly bonds or mortgages. And when they do that, those purchases go into the hands of the sellers of those which are mostly investors. And those investors in turn buy other investments and so it causes investment asset prices to rise, but it doesn't necessarily get the money into the hands of maybe those who don't have enough money or have investments and so on.

And then there's monetary policy-3 which is then the creation of the debt but to be, and the coordination with the central bank, central government to be able to send out checks. Because the central government has the ability to send checks to spend. They have the authority of how they spend it and they can tax, but they don't create the money and credit. The central bank creates the money and credit but they don't determine how it's spent.

So in something like the case that we had with Covid and the money needed to go directly to entities that it ordinarily wouldn't have gone to through monetary policy-2, there was the coordination between those two to create that money and credit through the government and then the government sells a lot of debt and the central bank comes in and buys a lot of debt and makes up for that. That passes through to the system. So

now you have a low level of real interest rates, money essentially being free and so all those checks. Then you can follow it through. There are the purchases of goods, services and financial assets which cause that to rise.

But you still have a fundamental gap, which is you can't spend more than you are earning and create it with debt without consequences because one man's debts are another man's assets. And so from the asset point of view you have very negative real returns that are existing, particularly in cash and so on. And so mechanistically, as the inflation rate rises, you create a lot more spending, a lot more money in credit, and the inflation rate rises. Then individuals, we're, in my opinion, in a transition in which people are realizing that the nominal amount of dollars that they have for spending, the amount of dollars they have, is not the best measurement and so they experience inflation. And then you start to see a shift in investors and others' behavior in terms of that interest rate. And so we're in that part of that cycle.

There's a big supply-demand – I'm almost done –- there's a big supply-demand issue here, which has to do with the amount of debt that has to be sold, that has been sold and so much more that's coming, because the portfolios of those who are holding U.S. dollar denominated debt, particularly foreign portfolios, are very overweighted in that and there's a negative, a significant negative real return. Real rates have come down by over 500 basis points over that period of time because they need to be lower because

of the nature of the debt money thing.

And so there's the risk, the risk that you also could see the selling of that debt. If you see the selling of that debt because it's not providing adequate returns at the same time you are selling, the government is selling more debt for its deficits, that creates a very large imbalance of that. That means that either interest rates have got to rise a lot which shuts the whole thing down or the Federal Reserve and other central banks have got to come in and make up that supply-demand gap by printing money and that produces that inflationary spiral. So we see that throughout history.

ALAN MURRAY: Ray, one takeaway from that is, that what we're experiencing now is not the result of some unprecedented supply chain shocks from the pandemic or something like that. It's a repeat of a pattern.

And from having studied those patterns, it sounds like you're saying, we're likely headed towards a reckoning. What's the probability here, that we're going to see a serious spike in interest rates? I just point out to the listeners the last time we had inflation at 7% we had mortgage rates at 15%, are we headed towards something like that?

RAY DALIO: I think we're headed to something like that, but different. If you can look to the high past periods of debt creation and similar points in the cycle, as there is a rise in

interest rates and the tightening of credit, that curtails things. It curtails demand. But there's a lot of debt service, and so the central bank, if the money leaves because it's not a good asset, the central bank then is faced with a choice. And it will certainly have to have another, throughout history it has always been the case, that initially there is a tightening of money and that's what produces the downturns that are deflationary.

But they're all fairly short periods because they are very painful. Particularly, if they take place in a political environment, such as the political environment we're in. And whether it takes a year and a half or two, the way it did in the Great Depression, or it takes eight months, the way it did in 2008 or it takes just no time like it happened in 2020. There will be the need to, for the central bank to make those purchases again, which depreciates the value of money. And so, you see another round of real rate declines. And more inflation.

At the end of the day, this environment that's either good for the debtor or good for the creditor, and there has to be the dealing with the reducing of the debt service burdens, which is what we do now. Right. Now you have no interest rates and practically you can get interest-only loans. So money is free. But that's not great for those who are holding those debt assets. So, you get that kind of movement which creates a set of circumstances where the currency declines, and you have the movement into other assets.

ALAN MURRAY: And just quickly, before we move onto the political piece of it, that you've already referred to. Do the patterns of history tell you anything about the timing? Timing is pretty important here. You know, you say at some point we're going to have to tighten up and probably have a downturn in order to deal with the consequences. But is that in six months, a year, two years, five years?

RAY DALIO: Well, again, there are probabilities associated, and then it's also one of those things where you can see it as it happens. So, the way it looks is, that the seeing it when it happens is when you see the selling of the financial assets at the same time you see the big imbalance, much bigger imbalances than we have now. And then there's a cycle, we all know the usual business economic cycle. And that tradeoff becomes greater later in the cycle. So, we began this cycle of providing a lot of money in credit about a year and a half...well March 2020. And this will be the third year of that cycle. Cycles are normally seven years. But you're pressing up against the operating rates and lower unemployment rates early in the cycle.

Cycles, those shorter-term business cycles, as we call them, their duration lasts as long as they start to run into constraints. We are in constraint territory. And so that particular dynamic is less likely to happen this year, although we're beginning the classic tightening part of the cycle now. And then, if you take 2023 and 2024, particularly as it relates to the presidential election, the risks become much greater. Because as you go

later in the cycle and the tradeoff between inflation and growth is a more difficult thing to manage by the central bank, then you start to see the supply-demand.

Also, when you start to have price declines in bonds, there is not only the low yield that bonds provides, the low return, but they provide negative price returns. Which contributes to the investor selling of those things, that begins to build a spiral.

So, I think, we're in the early stages of both the inflation part of it, but also the negative return part of it for the bonds, and so if I was to pick a spot, I would say, 2023 to 2024 is going to be a particularly risky spot.

ALAN MURRAY: Which, as you said, is right as we're gearing up for the next presidential election. So, let's move to politics and tell us what your analysis of historical patterns has told you about this pretty extraordinary moment we're in at the moment in politics. Certainly polarization that we haven't seen in our lifetimes.

RAY DALIO: Well, as I say, if I take these three main things happening together, they have to be looked at together. You have the financial. So when history, when the coffers are empty, the granaries are empty because you've drawn them down and you're spending more than you're earning. And you're financing it by debt. That piece is happening at the same time as there's a large wealth gap. And therefore left/right,

there's the rise of populism that becomes stronger.

In history, there's a movement to greater political extremes and each of the sides wants parties or representatives or leaders that will fight for them. And so you have populace of the left and populace of the right, and they want the strong fighter. They don't want the individual who's going to compromise.

But we have a system, a democracy, that's based on compromise across party lines. But no, they want a fighter. And so, you start to see in the political cycle that the extremes become stronger, and then it's natural in our system, because in each party, the democratic and the republican party, there are moderates and extremists but the ones that get elected, like in the 2022 primaries, will tend to be those that are going to be the fighters for me. And so on and they tend to become more extreme.

And the middle, you see the loss of the middle. You will have to choose, what side of the fight are you on. Are you on that side or this side, and moderate will be weak. You see in these cycles, you see it in the French Revolution, the Russian Revolution, the Chinese Revolution, or civil wars I should say, or Cuban, and so on, that the extremes become more extreme and one side has to fight against the other.

So, we have a situation which we're seeing that, for example, it's entirely possible, it's

not improbable, totally improbable, that in the 2024 election, neither side will accept losing. Because it's a win at all costs. To me, the January 6th was no surprise. It was just simply a straw in the wind if you find that arc. And so that political thing that's going on, is a dangerous thing in terms of that internal conflict.

ALAN MURRAY: You said...Ray, in the book, you said, something that I found really shocking, you put something like a 30% probability on an event of the magnitude of the Civil War.

RAY DALIO: Well, let me...I said 30% probability of something like, of a form of civil war. Let me be clear what I mean by that. I mean, that the failure of the legal system and the Constitution to be operating effectively to resolve disputes.

I can imagine a situation where, as I say, the 2024 election, no side would accept losing. And that we go to power. Power determining things. If I play that out, I think that there's a movement as you watch this in history, there's a movement of people to different geographies of the sort that we're seeing now. Not just because of taxes, but people go to, they say, that's an environment that I'm more like. And then you go to state's power.

We could have things like the sanctuary city issue in which the federal government

makes orders and the state and local government doesn't find those orders, and as you start to put a crack in that rule of law or the means of resolving it and compromising, then the system becomes a fight of some form between those parties, in which power rules, not the rule along the Constitution.

ALAN MURRAY: And then, Ray, let's go to the third pattern that you say interacts with the first two you've already described, that's the geopolitical pattern, which also doesn't look very promising at the moment.

RAY DALIO: Well through history, you know, as I say, every empire or country or dynasty, every empire has risen and declined for reasons, and you can see it plotted in the book. You could see education leads productivity, which leads wealth, which increases power, and so on. You could see, I plotted those measures, and you could see literally how it literally takes place to produce the rise and the decline.
And that's going on at the same time at a world level.

If you go in the cycle, the Dutch, well-educated and then became very inventive. Invented 25% of all of the inventions in the world. They were the ones that had the reserve currency at the time and were the richest. And they invented ships at the time that could sail around the world that were the best. And they would bring in with their military, and they would go there, and they would go out in the world, and they would

get rich. And with that, then the British learned about how to make ships better and cheaper, and they hired away the naval architects from the Dutch and they built better and cheaper ships to compete with that. And while the Dutch were very rich, and being very rich, when they were traveling all around the world, they would bring their currency. And so it became a reserve currency. The Dutch had the reserve currency. But, then they became less competitive, then they became a smaller and smaller share of world trade and those things changed.

Well the same patterns you see happened over and over again for the British and the Americans. The United States, became, after World War II, we entered the New World Order in 1945, was the New World Order.

The United States had 80% of the world's money because gold was the world's money, and we had 80% of the world's gold. We were dominant militarily. And we went through this period of peace and prosperity. And we produced that kind of growth. We accounted for; we were the largest trading power in the world. And as a result of that, the dollar became the world's reserve currency. And that gave us the exorbitant privilege that we have to borrow a lot, which creates its own set of problems. And then, of course, as time passes, then you see increasingly China do that.

Another words they were less expensive, they produced and they became more

competitive and as a result they accounted, today, China is the world's largest trading, they do more, account for world trade more than the United States, and most countries, and so on. They earn more, they get powerful in all of the different ways of getting powerful. And that happened.

So, history has shown that there are five types of competitions or we can call wars that happen between countries; that is a trade war, a technology war, a geopolitical influence war, a capital war and a military war. You can have all of those. We certainly have the first four wars or competitions going on, and we certainly have the military competition. We haven't killed each other yet, but we have that risk. And so, then, when you have a country, an empire sort of weakening internally at the same time as there is challenges from abroad, that is a riskier set of circumstances. And that's the type of circumstances we're now in, I think.

ALAN MURRAY: Yeah, and we certainly are seeing the indications of that this week. I mean, the amassing of troops on the border of Ukraine, the hypersonic launch by the North Koreans and kind of a vague sense that a lot of people in foreign policy have that this is all being done in coordination with the Chinese who, of course, are eyeing Taiwan for lots of reasons.

Probabilities, based on your study of patterns. Probability that this ends in a war.

RAY DALIO: Well, there's wars and there's wars, you know. There's wars in which you have a local kind of war, and there's pressures and so on. And then there's the world war, or another words, let's say, a local conflict that then converts into...gets escalated to become expansive.

So, as you point out, by the way, in history, there's always the dominant empire and then there are those other competitors that align, ally themselves. It's why, whenever one is a leading empire, you're never more powerful than all of the other empires combined.

It was why Napoleon lost, right. Because others, Napoleon and France at the time were so powerful that the others coordinated to have that. It was why the United States and China got together, Henry Kissinger and going together with Nixon, when the Soviet Union was a common enemy. So, we have that. And as you point out, when you have the Ukraine is sort of to Russia, what Taiwan is to China. And so, there is this issue that these contentious points, and, of course, military has been at the end of the day, you know, we live in, internationally there's not an effective world court and world order where you bring your case and get it adjudicated. It's power rules. And so you have that particular dynamic.

Now, the question is, in each one of those cases, what are the existential issues that

cause that. And then, most important, is how strong is each country. How strong is the United States. The biggest enemy, I think, of the United States, is the United States. Can we be strong. We have to be strong. We have to do the things that make you strong. And that will keep you healthy and protected.

ALAN MURRAY: Yes, it gets back to your interaction between the three. If you have an economic crisis on top of a disputed election at a time of geopolitical crisis, that's not a good mix.

RAY DALIO: Right, just imagine that.

ALAN MURRAY: We have lots of great questions in the chat that I want to get to. But I want to get to a fourth issue on your list. You talked about the big three, but the fourth, which would probably rank higher on many other people's lists, is kind of natural acts, pandemics, droughts, floods, to the extent their driven by climate change. What do you see in those patterns?

RAY DALIO: It's so interesting because when I...there was the big three that made me want to go back and study the rises and declines. Then, what I saw was the one in a lifetime natural disasters, killed more people, and toppled more empires, than all of the things I just talked about.

The one in a lifetime pandemic, the one in a lifetime flood, or drought along those lines. And so I would see how repeatedly that, that would happen. And what we are seeing, of course, is the relationship between climates. Climate changes are certainly raising the risks of those, the climate events, and raising the risk of a pandemic because from experts who are more expert on this than I am, that I speak to. As the climate change thing happened and demands interaction with nature becomes as it is, the risk becomes greater for pandemics as well as risks of natural disasters.

And if I would just say, where are we in that evolution. There's now, in my opinion, very fortunately, there's a movement to climate, and ESG, and such things. But the issue, really, if you look at the amount of time we have to make the changes, that we agree are needed. For example, estimated $20 trillion has to go into that in various ways. We are very short of time. And we are very early in the adjustment process of building and adjusting for the technology.

We haven't replaced fossil fuels yet. And this is going to be very inflationary. Because literally as you are making those choices and you are putting in a lot of money, you have to create a lot of money. We have a limited amount of hard money. So you have to produce more, you have to fund it more with monetization. And it will be a more inflationary. So that becomes a very, very difficult thing. And actually the likelihood of achieving those goals and objectives. There will be progress made, we will see, but it is

certainly a risk.

ALAN MURRAY: I have to ask you, before I open it up to these questions, I want to talk about the fourth for a second, because I listened to those four, the financial pattern, the political pattern, the geopolitical pattern and the climate change, natural acts pattern. It's easy to get pretty discouraged. You know, like why wake up in the morning, why shave. Is this an overly pessimistic view of the moment?

RAY DALIO: Look, I can be totally wrong. I mean, I could be wrong. My life in the profession that I'm in has always taught me that I have to be as accurate as I can. So I have a principle. If you worry, you don't need to worry, and if you don't worry, you need to worry. Because if you worry and you look at those things, and so I ask people, read the book, look at it, see the measurements, what do you think? I'm not trying to say this is right. You take a look, you decide, what do you think. I think we have to worry about those things.

And if we worry about those things, then we will reduce the chances of those things happening because we together, the world, has more resources in it than it has ever had. More technology. We have a lot better, we have more to share, and more things that allow us to go deal with this if we're good with each other and we can get past these things.

ALAN MURRAY: That's number five, right. That is the power of man to adapt.

RAY DALIO: Yeah, the power of man to adapt. Right. And with it, the technologies. What you see, and you see a chart in the book. Because you see all of these cycles and all of these ups and downs. And then, I plot life expectancy per capita income, and so on. And you see these movements when we're looking at it, a depression where you see wars and so on, but they barely show up in the longer-term chart that rises.

So, the adaptability of man. I remember the Club of Rome, it was a time in the 70s, and the world was extrapolating, here's our population, and here's how much food we're producing, and we're going to come into a constraint environmental clash. And it just won't work. So there was the gathering in the Club of Rome and I remember it well. And there was a theory that man, when they encounter the problems, man has the ability to adapt and that has been true. As we look at these things, I think, if we sort of worry and deal with our capacity to adapt, we can have a better outcome. So nothing is predestined.

ALAN MURRAY: Great. Lots of questions here to follow-up on. Thank you for that. It's a really fascinating light on our current situation.

You've clearly scared Mary Ann Casati, she says, what becomes the store of value

when you reach the confluence of these three secular bottoms you discussed: domestic, political and geopolitical? Where can you hide?

RAY DALIO: Well, there's a chapter in there called investing. It's one of the last chapters. And it takes you back to 1900. I think in our minds we have only experienced, we've experienced the best times in the cycle. Right. I was born in 1949. The New Order began in 1945, and you experienced that.

I think that the awareness of what can happen in that cycle, which is captured in that time. But I think the important thing is, this may happen or it may not happen. But the way I deal with it, I think is, there are two portfolios you have, and you have one that's just, it's like your insurance policy portfolio. Of those assets that can't be depreciated. And I could spend too much time describing what that is, but it's a balanced portfolio of some equity, some hedge assets like gold or perhaps even a little bit of currency. Or real estate and whatever.

And then also being aware of how to adapt in terms of ones geographic location. People are moving from one place to another. There is, within the country a risk of hollowing out in some areas. You know, if people from New York and San Francisco, who have businesses or whatever, take the tax base from some of those other…there's a dynamic there that can make the geography an issue. So, paying attention to those things are

important.

There are too many things. But it's addressed in the book of various patterns of history and also the things to do.

ALAN MURRAY: Ray, Paul Tramontano asks, based on this study, what policies should the U.S. adopt to ease the transition?

RAY DALIO: The most important thing is not fighting with each other and coming together. If I was President of the United States, I'd have a bipartisan cabinet. I would probably have the equivalent of a Manhattan Project in which I took smart people from both sides to engineer an economic plan that is beneficial for the majority of the people. We have an economy which is not as beneficial for the majority and leaves a lot of people in terrible sets of circumstances. I have intimate contact with some of this. Because I live in Connecticut. My wife is deeply involved in trying to help high school students in the worst areas. I'll digress into it, just briefly.

I will give you an example. Connecticut, one of the richest states in the country. Big wealth gap. In that state, 22% of the high school students are either disengaged or disconnected. Disengaged means that they have an absentee rate which is greater than 25% and are failing classes. Disconnected means they don't know where they are

because they've dropped out of school. 22% of the high school students, that's what it is. And if you look at their school districts and the budgets, and so on.

So there's this kind of gap which feeds on itself because they will not be productive. The incarceration rates are high and so on. There have to be ways in which it works well for most people in the society and those people are productive and you have to have a bipartisan approach rather than a war in which one side is going to beat the other side at all costs.

ALAN MURRAY: Yes, a fascinating question from Troy Prince. He says when you look at the empires that have been disrupted by natural disasters, was there any pattern as to where they were in the growth cycle when the natural disaster occurred? Or is it completely random?

RAY DALIO: What was, the events themselves seemed random, or at least I couldn't attach it to anything economic. What was not random is whether there was a lot of savings in the form of the Treasury was strong and the granaries were filled. So when you had those periods where they were spending more than they were earning and they had a lot of debt and they did not have a strong income statement and a strong balance sheet to withstand it, and you did not have the granaries, and so you see in history they didn't maintain the infrastructure. You see it like in the canals. They let silt get into the

canals and so on. And so when the challenge came along, they were not prepared to deal with it well.

ALAN MURRAY: Yes, interesting, interesting, and again not encouraging. A question about China. What advice do you have to give to someone now who is interested in gaining exposure – I assume this means investment exposure – to China?

RAY DALIO: Get exposure, there's a lot of misunderstanding that exists now between the countries and, you know, frankly, it's not easy to try to help understanding because sometimes if you point out that something is good, going well there, and we're in an environment like you're on one side or the other, and so it becomes problematic. But, you know, to gain some understanding, and also I would say diversification is an important thing. Paramount importance is you don't know, what we don't know is probably greater than what we do know. And for that reason, diversification.

So when you think about diversification, that's diversification of countries, diversification of currencies, diversification of asset classes. So that diversification is important. So I think that each person looking at their portfolio would say am I balanced in the world? That balance will be an important thing, of paramount importance. And also I would say this is not an environment in which owning, holding cash and debt instruments is attractive.

So I think people, another thing I would recommend in terms of thinking about that diversification is look at your real returns, not your nominal returns. We're entering this period of time, like are you earning more than inflation is operating? And while investors think that cash is the safest investment, it's not, because you lose the buying power. You could lose, you know, 5% a year give or take some. That's a lot of loss of buying power.

So when I look at China, and the question was particularly of China, I would say China is one place, but more importantly diversification as a whole and to worry particularly of thinking, take into consideration inflation and think about the, probably the vulnerability of being in cash, and have a diversified portfolio that includes beyond the United States and China, also other places. There are parts in the world, a lot of the Asian countries around there, I don't have a problem.

The three things that I would pay attention to generally speaking, very simply is, this would be true for a country but a country is just the aggregate of its people and companies. Is it earning more than it is spending? Does it have a good income statement? And does it have a good balance sheet? Assets more than its liabilities. Okay, then it's financially strong. If it doesn't, and it's financing that by debt or some other ways, you worry. The second thing, is there internal order or internal disorder? And you can see this in terms of let's say the different societies reacting to how to deal

with Covid. If it's internal order, that's a good thing. And then three is, are they at risk of an external order, an external conflict or not? And so when I run down my list, those are the things that I pay attention to. So I wanted to take it just beyond China and answer the question more broadly.

ALAN MURRAY: Then sticking with the inflation point for just a minute, Matt Beck asked, do you think that the risks to the financial system will shift to being more deflationary at some point in the near future? Or do you think policymakers are willing, have the tools, the commitment to continue to monetize that much liquidity to manage the next phase?

RAY DALIO: Again, on the supply-demand, we're going to create a lot more debt. We're going to create a lot more debt and that debt has to be sold. We're at the stage of, at the beginning of a tightening, but if we use interest rates, for example, it's very unlikely that the rate of interest increase will be material enough to provide a return that's adequate relative to the inflation rate. Because we're also, we have a number of inflation forces, I'll digress into that, but the rate changes. And then, although what will happen, as that rate change happens, because the duration of assets has become longer, which makes them more sensitive to interest rate changes, you'll start to see some of the markets begin to crack. That comes later. We're at the beginning part of that cycle. I don't expect much in that cycle.

So I would say, as you look at that, the supply of debt and money can change much greater than anything else, and the penalty throughout history, when you have a downturn, the answer at the end of the day is they always devalue. They always provide the buying power because it's needed. And if you don't provide the buying power so that the inflation risk of that is greater, I don't see deflation in the cards.

ALAN MURRAY: Thank you. A couple of quick questions. We're going to run out of time here pretty quickly. Kevin Silva asked about crypto. What's your view? Is that part of your hedge portfolio? How do you think about it?

RAY DALIO: I think we're in an era now, we're beginning an era, and the question is what will be or what group of things will be the monies of the future? Money is a medium of exchange but a storehold of wealth. And there will be competing types of money because of the dynamic that we're now talking about. I think that crypto is a wonderful technology, and then there's also a storehold of wealth. So bitcoin is sort of a digital gold, but there's also cryptos that are not related to digital gold. They're just ethereum and so on.

And I think that it's always very difficult to tell what the new storehold of wealth is. Maybe it's more, you know, the younger generations. So I think it has to be respected because it's been eleven years and it hasn't been hacked and so on. However, I don't

think, for various reasons, that it will be anywhere near a competitor to gold because of the fact that central banks or sovereign wealth funds and the like, it has a medium of exchange, and it can be tracked very easily as distinct from the same element of privacy. So that's a long-winded answer, I guess, but it means that it's worth something. I have a tiny percentage of my portfolio in it, tiny, for that diversification reason.

ALAN MURRAY: And a somewhat related question from Saurin Shah. Will capital markets remain free and open? Or will they become increasingly protected and restricted?

RAY DALIO: I think you have to look at them becoming increasingly protected and restricted. If you follow the pattern, when the financial problems – but this is farther down the line – the government becomes more involved in that. And so if you look at that, history has shown, for example, there was the outlawing of gold. I mean,1933, it became give me your gold. There was the establishment of foreign exchange controls. That's a very normal way. Because the financial flows normally are to move to seek protection and to move into other assets and its detrimental to the government's management of things if those types of things happen.

So it becomes in the cycle a greater risk, you know, and that might be a few years down the line, five years down the line I'm saying. But you're starting to see some of that with

capital controls, for example, pertaining to what stocks, investing in other countries, can you invest in China? Can you not invest in China? Those kinds of things enter into the picture. So you're seeing the government, and you probably will increasingly see the government be involved in the capital markets.

ALAN MURRAY: I think one of the interesting questions around that is whether crypto could develop to the point that it becomes a way of evading controls, but I would imagine governments will work to stop that.

RAY DALIO: Well said.

ALAN MURRAY: So final question here before we turn it back to Barbara. And this comes from Leon Brujis. He asks, what is something that you know to be true that everyone else disagrees with?

RAY DALIO: I would say, I don't know if everyone disagrees with this, but in looking at the supply-demand of money and credit and watching it flow, I believe that I have an understanding of that in terms of the mechanics, and I might call that the longer-term debt cycle and the reasons that each of the peaks and troughs in interest rates hit zero, the reasons that real interest rates have to be negative and the dynamic that is taken place in that cycle. And I could watch the actual flows take place in a way that others

are not following. And I would say that that would be, which raises my concern about the financial flows element, I would believe that that is something that's a big thing that people don't understand enough about that...I feel that I understand pretty well. Now, you know, whatever I don't know is still greater than whatever I do know.

ALAN MURRAY: Oh, I don't know, Ray, that was a fascinating, head-spinning, discouraging, moments of encouragement hour. Thank you very much. It was really, really very interesting. I hope it encourages everyone to go out and read that book. Barbara, let me say one thing before I go. The book is very fat, but Ray has made it easy on those of us who run away from fat books by putting the most important lines in boldface and encouraging you to just read the boldface, if you want the shortcut.

RAY DALIO: There's a short book in the longer book. You can just read the short.

ALAN MURRAY: Go for the short one.

RAY DALIO: And then digress into whatever you like. Barbara, thank you.

PRESIDENT BARBARA VAN ALLEN: Well, thank you both. And Ray, I think you're going to inspire a lot of folks to go brush up on their history because obviously we see it repeating itself. And Alan, thank you. Just a terrific conversation, so kudos to you both. I

do want to mention that Ray has actually generously offered to provide a complimentary copy of the book to all the attendees today. So there on the screen you can see the email. You would provide your mailing address. His team will follow-up and get you a copy. And for your convenience, we also have printed the link in the chat box. So there you see it and again, what an amazing book.

So it is our hope to be back in-person and being able to provide both virtual and hybrid events with the in-person element as we go forward. Unfortunately, obviously the variant has gotten in the way for January. But stay tuned because we'll definitely be holding in-person hybrid events this year, all things going our way.

Later this month, we have Glenn Hubbard, Dean Emeritus and Russell Carson Professor of Finance and Economics at Columbia Business School, former Chair of the U.S. Council of Economic Advisors, and former Chair of the Economic Club of New York, by the way, on January 24th. That will a virtual event. Nancy Sims, the President and CEO of the Toigo Foundation will be joining us in February. Michael Saylor, Chairman and CEO of MicroStrategy, is going to join us March 14th. And that will be the kickoff of our Crypto Series. We've got some really exciting speakers joining us this spring that will focus in on the world of crypto, so stay tuned for that. Michael Saylor is the first. And that will again be in-person. And then we'll host our board member and President and CEO of TIAA, April 11th, Thasunda Brown Duckett. So please mark those

down on your schedule. We're also working to confirm additional prominent speakers – Henry Kissinger, Eric Schmidt, and many more. So again stay tuned.

And finally I would be remiss if I didn't recognize those of our 343 members of the Centennial Society joining us today as their contributions continue to represent the financial backbone for the Club and help us bring you the programming such as today's. So again thank you for joining us this morning and many thanks again to Ray and Alan, and everyone please have a great day. Thank you.