**Thérèse Byars –** Corporate Secretary

Welcome to the 2019 FRMO Annual Meeting of Shareholders. My name is Thérèse Byars and I'm the Corporate Secretary of FRMO Corp. (the "Company"). Joining me are Murray Stahl, Chairman and Chief Executive Officer, and Steven Bregman, President and Chief Financial Officer.

The FRMO Annual and Quarterly Reports can be found on our website along with the 2019 Shareholder Letter, all of which can be found at www.frmocorp.com.

And now I would like to present the seven Directors, all of whom are candidates for reelection. They are Murray Stahl, Steven Bregman, Peter Doyle, Lawrence J. Goldstein, Lester J. Tanner, Allan Kornfeld, and Jay P. Hirschson. Also present today from our auditors, Baker Tilly Virchow Krause, LLP, are John Basile and Patrick Warch.

We now proceed to the report on the tabulation of the proxies for the two proposals. The Proxy Committee ("Committee"), appointed by the FRMO Board of Directors, is here this afternoon to represent those shareholders who gave their proxies to the Committee.

Notice of this meeting and proxy voting materials were sent to shareholders of record as of July 26, 2019. The Inspectors of Election report that proxies were received from FRMO shareholders holding approximately 38 million shares of common stock, or 87% of the total common stock entitled to vote. Therefore, this meeting is properly organized with a quorum present and we may proceed.

There are two items of business for this meeting. The first is the election of the seven Directors, who were nominated in accordance with the Company's governing documents. The second item of business is the proposal to ratify the appointment of Baker Tilly Virchow Krause, LLP as the Independent Registered Public Accounting Firm of the Company for the Fiscal Year Ending May 31, 2020. The Board recommends a vote "for" on both items.

Based on the preliminary report of the Inspectors of Election, all seven Director nominees have been elected to the Board, with all nominees receiving at least 99% of the votes cast and 87% of the shares outstanding.

The proposal to ratify the appointment of Baker Tilly Virchow Krause, LLP as the independent registered public accounting firm of the Company for the Fiscal Year Ending May 31, 2020 has been approved, with approximately 99% of the votes cast and 87% of the shares outstanding. This completes our formal business.

The next item on the agenda is the Chairman's report to the shareholders. Mr. Stahl will review key points related to the 2019 financial results. When he has finished his remarks, he and Mr. Bregman will answer questions.

And with that, I'll turn the meeting over to the Chairman of the Board, Mr. Murray Stahl.

**Murray Stahl –** Chairman & Chief Executive Officer

Thank you, Thérèse, and thanks everybody for being here. Today, rather than beginning with a key point, I'll start with a minor point, which is that I owe you an apology. Ordinarily, the shareholder letter would have been out some weeks ago, and I actually wrote it a while ago, but we posted it on our website just this morning. When you reach a certain level of corporate assets, the number of people who need to review that letter before it goes out expands exponentially. Given that, I've learned a valuable lesson with this letter. When someone suggests a change to your letter, you should, generally speaking, accede to that change. It saves a lot of time.

With that, let's start with FRMO. As you know, underneath FRMO is Horizon Kinetics, which is an investment advisory company, which is a great business. The trouble with that business, however, is that the asset mix one has to choose from is not great. It's obvious in bonds, so I'll begin with those. With a 10-year Treasury, a big increase in that yield would be if it got to 2%. Whatever it is at the moment, take away some taxes, take away some inflation—and reasonable minds may differ as to what the inflation rate actually is—I think it's pretty self-evident the Treasury produces a negative real rate of return.

If interest rates were to rise, it wouldn't be so great for equities. Equity valuations are very high, and the bulk of the great companies are not growing their revenues very much. So, there is not a lot to choose from in that category, either.

During the last couple of years, we've explored alternative investments in the following manner—and some of this is explained in the shareholder letter, but I'll do it in a different way in this forum. We need to put enough money into new opportunities such that if they were to work, they would have an impact; but we can't put too much money into investments that are entirely new in case they don't work. And we need to be cognizant that they might not work—particularly cryptocurrency, but more about that in a moment—and size them so that if they fail, that wouldn't be a fatal outcome for the company. As a matter of fact, with cryptocurrencies you wouldn't notice a major change on our balance sheet. We would not be happy if it didn't work, but it wouldn't be a calamity, and we'd live to fight another day. That's the whole idea.

One of the themes in the shareholder letter is that when you explore the various elements of cryptocurrency, no one can know if they will work or not. Theoretically, if the fiat currencies of the world continue to be debased, then cryptocurrencies with a fixed issuance monetary policy should rise in value in the fullness of time, and they should ultimately become the predominant asset under the operation of what's called Gresham's law in economics. Bad money drives out good. Theoretically, that's what should happen.

I'll put some numbers on it, which are not presented in the shareholder letter. Using bitcoin as an example of a fixed issuance currency, let's say its only success would be if the market value of all of the bitcoin in the world were to become equivalent to the current market value of the Brazilian reais, the currency of Brazil, which is $720 billion. The market value of bitcoin changes every minute, of course, but it's currently roughly $180 billion. So, $180 billion goes into $720 billion four times. If that's all that happens, you could make four times your money. Even if it were to take a decade, that's a very robust rate of return.

But let's make it a little more interesting. Let's just say that bitcoin is successful to the degree that it has the same value as the Brazilian reais and the Iranian rial. The Iranian rial has about a $360 billion market cap, and $180 billion goes into $360 billion two times. Two plus four is six. You'd make six times your money. The Iranian rial, incidentally, collapsed about a month or so ago, so it's almost a hyperinflationary currency. You would think that bitcoin, at least in relation to that currency, would be successful as a store of value.

Let's continue the exercise to include the Russian ruble. (Notice that I'm only picking currencies that start with the letter R.) The Russian ruble has a market capitalization of about $720 billion. So, $180 billion goes into that four times. So, you'd have four times the Brazilian reais market capitalization, two times the Iranian rial, four times for the Russian ruble. That's ten. If that 10 times your money took a decade to transpire, that would 25% per year.

Now, let's add the South African rand, which is also currently a highly inflationary currency. Its market cap is about $360 billion, and $180 billion goes into $360 billion two times. Add it to the others to get a return of 12 times. And that's if you did nothing other than hold bitcoin. That's an extraordinary rate of return. I don't know of any other type of asset class with that potential.

Of course, it could end up being worthless too, which is why we should return to the prior point. We can't put so much money into it that in the scenario of failure we would be damaged beyond the degree that we would like. So, that's where we stand. And it goes for everybody who becomes a client of Horizon Kinetics as well. If there's an allocation made, it should be a small amount of money.

Let's move on to the question of how we view the asset management company. Remember, we're not asset gatherers. We're not trying to raise assets; we're trying to make money. Of course, asset management companies prosper when the assets that are managed expand, but the question is how are they going to expand? Will they expand because you raise a lot of money and have a fairly de minimis rate of return, or will they expand because you have a fantastic rate of return, even though you didn't raise a lot of money?

Take this 12-times theoretical rate of return on bitcoin that I just outlined. If you had $100 million in a cryptocurrency fund that increased 12-fold, and you had a 20% fee from that return, that fee would be taken on the difference between $100 million and $1.2 billion. That's a lot of money. Now, of course, the potential is much greater than that, because I merely mentioned four currencies, which is minor in the world of currencies.

Of course, holding cryptocurrency is not the only possible activity. We also got into mining. I think we're operating something on the order of 5,000 servers. The way we look at it, it's an alternative investment. But the rest of the world does not see it that way. Technically speaking, as far as regulation goes, it's a business, not a security. We're simply operating computers. A business like that can be expanded greatly. Maybe it makes more sense to have a separate business like that instead of it being encased inside Horizon Kinetics. Maybe we'd be better served if that business ended up in FRMO because it's not, technically speaking, what a registered investment advisor does.

It's just that when we started these ventures, we started them in a place where we had the resources to start them. Ultimately, we might be better served if we restructured the whole thing. And that might happen one day. We just don't know yet. We don't yet have enough information to make these decisions.

At the moment, in the world of mining, the returns are fairly robust. That could change. I don't expect it to change, but it's possible. At the moment, it's not so easy to come by the equipment, because the chips are made in Taiwan, and the machines are assembled in the Peoples Republic of China. Anything that comes from the Peoples Republic of China has a tariff associated with it. No one wants to pay the tariff, and we don't want to pay it either. The bulk of the production is being moved to places like Malaysia. While it's being moved, there's not a lot being produced. So, it's not easy to come by machines. We can buy some used machines but, at the moment, the market is very tight.

I don't want to get technical, but I'll explain a bit about what's called the difficulty rating or the aggregate hash rate. The aggregate hash rate is just how much computational power there is to solve the validation algorithm for mining a bitcoin transaction. The more the transactional power increases, the more the coin theoretically is worth. I know that's a very abstract concept and I know you never should throw numbers into a presentation like this, but I'll try it just to see what happens.

There's something called the network effect, also known as Metcalfe's law. The network effect is easier to remember, so let's just call it the network effect. I'm going to throw the formula at you. It sounds complex, but it's not. The formula is: $n (n – 1)/ 2$, where n is a participant in the system. Think of it as if it were telephones. Let's say I invented the telephone. If I have one telephone, what is this network effect? Well, in this case, $n = 1$. Replace n with the number 1 and we have $1(1-1)/2$ or $(1 \times 0)/1$, which is zero. Any number times zero is itself zero. It doesn't matter if you divide it by 2, it's still zero. So, if I have only one phone, it has no value.

Now, let's say there are two phones: n = 2. The formula would look like this: 2(2-1)/2 = 1. So, it has the value of 1. Now, let's say n = 3. I hope I haven't lost anyone. Okay, so n = 3. When we plug that into the formula, we have 3(3-1)/2, which equals 3. So far, we have derived a zero network effect for one unit, an effect of 1 when we have 2 units, and an effect of 3 when we have 3 units. I won't continue the calculation, but if we kept going to 5 or 10, and we plotted out the results, you would see what's called an asymptotic upward curve, which basically looks like a hockey stick.

Usually when people talk about numbers like this, they don't say asymptotes, and they don't say hyperbolas; they just say hockey stick because everybody knows what a hockey stick looks like. When people look at the graph of bitcoin over the ten years of its lifecycle, they see this hockey stick and they say how can it be worth anything? Because what is it? It has no intrinsic value. It doesn't make any money. It doesn't have any assets. It's just a bit, a digital notation. How can it have any value at all? Let alone that it has a graph that looks like a hockey stick. That must be a bubble, right?

Well, the answer to those questions is that the more people are willing to use it, the more value it has, like anything else, like a phone network. So, that's it.

At the moment, I would estimate that there are something like 32 million bitcoin wallets in the world, and that number is growing at least 50% per year. If it's tens of millions right now, what will happen in one year, two years, three years, four years? In other words, going back to the network effect formula, the number of participants, n, will continue to grow. There's no other asset like cryptocurrency. That's why it informs so much of what we're working on at the moment.

It doesn't mean we've forgotten about more traditional assets. There is a certain other company—you know the name of it—that we had occasion to be involved in a bit of a, you might say, proxy contest. Hopefully, everything has been settled. We don't know for sure, but I think relations are a lot more amicable than they used to be. There was a settlement, and now there is an advisory committee charged with exploring the idea of converting it into a conventional C corporation. I can't really say much more, since I'm under a confidentiality agreement, but the asset itself I can talk about. It's an incredible asset. Contrary to what people say about petroleum and crude oil—let's just put it this way—and I wrote about this recently—there are two points that can be made about that. A lot of people believe that alternative energy will replace conventional energy—oil, natural gas, and so forth—and that might be true. I personally disagree with that view. It doesn't mean that I'm right, but I think the demand for conventional energy resources will go up. I'll just share one or two observations with you.

Are you aware that a couple weeks ago, San Bernardino County in California made it illegal to construct—remember, this is California—to construct a solar energy farm? Isn't that an incredible fact? I believe it is known as Renewable Energy Policy 4.10. It's a fact; you can look it up. Why would they do this? Because, if you've ever been in San Bernardino, it's really a desert area. What better place to install solar panels than in a desert? It doesn't really rain; it's sunny almost every day. But, if you've ever been in the desert, you will have noted that if you're there long enough, a fine dust coats everything, including solar panels. Depending on wind conditions, after 7-14 days, a crust develops over the solar panel. That crust must be removed, because the panels lose their ability to generate electric power. They must be power-washed, which requires carrying in the water, which is very heavy. That water comes from local sources. But those are the local sources that residents rely on.

The irony is that it's a renewable energy source, and even water is renewable in the sense that there's a hydrologic cycle—but it causes a problem. When people make these assertions—I'm not saying I'm right—all I'm pointing out is a minor fact that I think I am right on. The variables are so complex when you're dealing with climate or environment or the relationship between hydrocarbons and some other environmental or economic factor—it's so incredibly complex, that it's very hard to predict the consequences of changing from one energy source to another.

I have one little hobby that I'll share with you on this point. I like to collect and read newspaper magazine articles many years after they're published. With the benefit of hindsight, I find it very interesting and to some degree amusing. So, it wasn't very many years ago that we were worried that the global ice age was upon us. I don't question anybody's judgment, but they were saying we would run out of natural resources and would not have enough oil, therefore, we had to reduce production—the word was conservation—because we're running out of oil. Now, we're using too much oil, and we must stop using it because we're going to overheat the planet.

They might be right. It's just that these are very, very challenging outcomes to predict. Anyone who attempts it should proceed with a degree of humility. I don't think there's an obvious alternative to the use of petroleum. As far as I can tell from the figures, the use of it goes up about 1% a year, and I think they will be using petroleum long after we're all gone. I don't think the need for petroleum will go away.

The S&P energy subset, which is the SPDR S&P Oil & Gas Exploration & Production ETF (XOP), trades at a discount to book value. I don't know if that has ever happened before—and it's actually trading at a very substantial discount to book value at this time. I looked in the records and maybe I missed something, but I believe that it's never traded at a lower valuation than it does now in relation to book value. Obviously, the world is convinced that hard assets of that type will be displaced, but I'm not convinced of that. That's why this asset, like all hydrocarbon assets, trades at a big discount. And we were able to buy a significant stake in it.

How were we able to buy a significant stake in it? The more interesting question is how were we able to buy a significant stake in it and protect ourselves in case we were wrong—and we could be wrong about oil prices, we could be wrong about the hydrologic cycle, we could be wrong about global warming, about which I'm certainly no expert. We were able to raise the money to buy it from our short position in path dependent ETFs.

So, basically, what we've done over the years with path dependent ETFs is to redeploy the substantial profits from those investments—though it's hard to deduce the profit position from our balance sheet figures because, for various reasons, we had to cover certain positions and realize taxes and taxable gains over time; that's not something we wanted to do, but we had to. I'll go into more detail in the Q&A, if you'd like. Anyway, path dependent ETFs are ETFS that decay gradually over time as they ultimately approach zero. They don't actually get to zero. It's like Zeno's paradox: drop a stone onto the floor, and on the way it first falls half the distance, then a quarter of the distance, then an eighth of the distance, and if you keep dividing it in that way, theoretically, it never reaches the floor, even though, realistically, you know that it will hit the floor. It's similar for the path dependent ETFs, except that when they reach a certain low point, they reverse split the shares, and they keep going down from that new higher price level.

I think that in prior letters I explained what path dependent ETFs are; so, I won't repeat that right now but, if somebody has a question about them, I'll be glad to go into it in greater detail. Basically, they are actually a source of cash flow for us. They are a renewable asset. I think that they are more renewable than solar power, actually, because investors keep creating more of them, in terms of NAV contributions. There's only so much solar luminosity that hits the earth, but the number of path dependent ETFs, in theory, can be infinite.

Of course, use of these has to be in proper proportion to our balance sheet, because there are times when they go against you, and that's part of the risk factor. You may not know the outcome day by day or month by month but, in the long run, you know the ultimate outcome. It's an important business activity for us. When you see the short positions on our balance sheet, it is mostly comprised of our path dependent ETF shorts. There is a tiny number of conventional shorts, but those are de minimis and, no matter what happens, they won't meaningfully impact the balance sheet.

You'll see that cash is at a very high level and necessarily so. Why? Because there is a lack of investment opportunities. Could we use that cash and put a lot of money in cryptocurrency? Could we do a lot more path dependent shorts? Yes, we could, but then we'd be exposed in ways we really don't want to be. We want to take just enough risk so that if we're wrong, it's not a catastrophe, and if we're right, it'll make a big difference to shareholders. So, that addresses the cash balance.

I should say something about exchanges. They remain a focus for us. We have an investment in the Bermuda Stock Exchange and an investment in the Minneapolis Grain Stock Exchange (MGEX). Regarding MGEX, there are some press releases that I invite you to read—this is all publicly available information. They recently announced that MGEX and Miami International Holdings (MIH) have entered into an agreement whereby MGEX will be the exclusive exchange for listing, trading, and clearing futures products on the SPIKES Volatility Index. SPIKES is basically a volatility index like the VIX. If everything goes right, then in not that many months this competitor to the VIX will trade on the MGEX. You can read all about it in the press releases on the MGEX website.

Volatility is a growing asset class. If you think about volatility, at the end of the day, people buy and sell conventional securities and/or indexes in order to control volatility, and they're creating, reducing, or increasing volatility by using conventional securities. If that's all you're doing, you're a lot better off just buying a volatility future—which is the statistical expression of volatility at any given moment—and leaving the bulk of your money in Treasuries—and trading that way. That operation is a lot less complex.

Years ago, we had a big investment in the CBOE, and I guess we still do at Horizon Kinetics. You might recall that when we undertook that investment, I believe that the CBOE's Volatility Index, called the VIX, contributed only a tiny amount of volume to the CBOE. Ultimately, it became the most profitable product on that exchange. I think that volatility is still a minor asset class in relation to the bigger asset classes, so it has a long way to go.

In summary, and I'll open the floor for questions in a minute, I'll tell you that we haven't ceased our search for alternative assets. We're not looking for alternative assets as a mere means of escaping from conventional assets. They'll have their day again, because there's always something that happens that brings valuations back to normal. It could happen years from now, it could happen moments from now, we just don't know.

We're not moving away from anything; we're not giving up on what we've built the company on. We're just adding to our palette of activities and exploring some new vistas and horizons, so to speak.

So, with that, I'll give you an opportunity to ask us some questions, if you like.

**Questioner 1**

I'm curious about Markel, its investments in the insurance-linked securities and our investments in insurance-linked securities, and why there seems to be an incongruity or disconnect between their bullishness in it and any movement in our investments. Thank you.

**Murray Stahl –** Chairman & Chief Executive Officer

Regarding insurance-linked securities, we have never invested in insurance-linked securities for FRMO. We do own 40-plus percent of the Bermuda Stock Exchange, and insurance-linked securities are an important product for that exchange.

I don't want to give you any idea that I'm not bullish on insurance-linked securities. Let me just explain what the operational problem is in making them an investible asset class.

For those who don't know, an insurance-linked security is basically a bond issued by an insurance company with a very high rating. It's not uncommon to see A-rated bonds. Given today's interest rates, they actually have shockingly high coupons; 7% or 8% is not unheard of for four- or five-year maturities.

So, they have a very high interest rate, a relatively short maturity, an even shorter duration, and very high creditworthiness. What's not to like, right? It should be a big asset class. What's not to like about it is that there's a certain quid pro quo in investing in them. What's the quid pro quo? Each bond is tied to an insurance pool and, though it's a statistically unlikely occurrence, from time to time it does happen that the losses of that pool exceed a certain predetermined quantity. When that happens, the insurance company has the right to take some of the losses out of the bond. In extremis, if the losses are big enough, they can devastate the entire bond issue, meaning that the bond itself could be worthless, or nearly worthless.

The challenge in making insurance-linked securities an investible asset class is that you clearly have to be very diversified. In other words, if you're going to invest in them, you have to be as diversified as the insurance company. A property casualty company, for instance, might insure millions of buildings. But your bond might be in a pool that's exposed to a certain sector of a city, and what if there is a calamity in that sector of the city? You need to be in lots of insurance-linked securities pools, and just the operational infrastructure to make these securities tradable and liquid, to set up exchanges that actually engage in this asset class with the appropriate technology, is coming, but it's not there yet. Just like cryptocurrency. Could you buy bitcoin? Yes. Could you sell it? Yes. Clearly, you can trade it, but not with the facility and ease that you could trade the shares of a New York Stock Exchange-listed company. Until the insurance-linked securities universe is sufficiently large, it will be a minor asset class, in my opinion.

**Questioner 1 (cont.)**

Are transactions occurring on the Bermuda Stock Exchange, or are they occurring off the market, and is that why the exchanges aren't seeing the benefit of the growing, albeit, still small, market?

**Murray Stahl –** Chairman & Chief Executive Officer

The answer is both. There are trades on the market, and there are trades off the market. The Bermuda Stock Exchange is by far the biggest factor. It has the largest market share of any venue that trades insurance-linked securities. But, in a sense, it's a prisoner of the market itself. You can't have a situation in which the volume grows unless the issuance grows correspondingly. Someone who buys an insurance-linked security is likely to hold it to maturity. Assuming it works, given today's interest rates, why would you trade it?

Let's say you believe, maybe for good or bad reasons, that the insurance company will not draw on your bond holding. Maybe you're right, because I think 97% of the time that's what happens. Given current interest rates, if you have an 8% coupon from an A-rated credit, why would you trade it? You'd buy it and that's it.

The market might be growing in that sense, but trading volumes, a suitably liquid trading market, doesn't work yet from the exchange's point of view. I'm just speculating but, if interest rates were to go up and, let's say, the next issuance of insurance-linked securities might offer 11% or 12%, speaking hypothetically, maybe people would sell the 8% bond and buy the 12% bond. That's why the situation for the Bermuda Stock Exchange is a little bit different animal than Markel.

**Questioner 1 (cont.)**

Just to summarize this so I understand it, will our investment in the Bermuda Stock Exchange benefit from the secondary trading of these insurance-linked securities rather than the issuance of them?

**Murray Stahl –** Chairman & Chief Executive Officer

Well, the exchange can only benefit if the security is listed, because it earns a listing fee. If you want trading volume, it has to trade—two people must decide to trade it.

**Questioner 2**

Of all of the imbalances and distortions that exist today—with negative interest rates right up there—there's a large pool of bonds with which to potentially trade. The majority of them are liquid sovereigns, which I guess is on the order of $16 trillion of negative yielding debt. Have you given thought to the utility of potentially shorting those for the purposes of a longer-term arbitrage? Is it possible that 50 or 100 years from now, we may look back on this distortion and say, boy, that was a really obvious trade that not a lot of people were doing?

**Murray Stahl –** Chairman & Chief Executive Officer

To begin with, I'm not shorting negative yielding bonds. If you're holding the shorts for a long period of time, the yield is not so negative that you can make much money. Plus, there's a cost to borrow them. So, from that point of view, it's actually a negative carry to short it and pay the fee.

I believe that lower rates—and maybe negative rates—in the fiat currencies are going to be with us for a very, very long period of time. I might be wrong, but here's why I believe that. The total debt, collectively, of everybody in the United States, including everything from the government to somebody who has a car loan, is $74.19 trillion, and it goes up $8 billion every day. To use a round number, let's call it $74 trillion.

Now, let's say rates go up by 1%. Collectively, all the people who are responsible for that debt, or their portion of that debt, would have to eventually pay $740 billion a year more in debt service, because 1% of $74 trillion is $740 billion. I believe that $740 billion on a GDP of, let's call it $21.3 trillion, would be too high a burden.

I'll give you another number. The interest on the $74-plus trillion right now, on an annual basis—remember, although rates are very low, there are people paying 24% or 25% on their car loans—the collective interest is $3.5 trillion. It grows every day just because there's more debt outstanding.

Take $3.5 trillion, add $740 billion to it, and you're closing in on $4.3 trillion for an economy with a GDP of $21.3 trillion. In theory, the national income is $21.3 trillion, but we don't really have access to $21.3 trillion of national income. We have access to only a subset of that amount, because of all the interest that has to be paid. There is some level of interest payments—I don't know what it is—but there's some amount of interest that collapses everything.

For the central bank to raise interest rates even by a de minimis quantity—let's say it wasn't 1%, but it was 2%. I think in that scenario, it's obvious that the economy couldn't function. I don't think in our lifetime we're going to see rates go up. I don't even think beyond our lifetime. I think what we will see is the debasement of the fiat currencies. So, I'm in a different camp as far as that goes.

**Questioner 3**

How are you coming along with your discussions with the trustees of the Texas Pacific Land Trust?

**Murray Stahl –** Chairman & Chief Executive Officer

Okay, well, that's a very good question but, unfortunately, because there is a confidentiality agreement in place, I can't discuss it without getting myself in a lot of trouble.

**Questioner 3 (cont.)**

We'll wait then. Thank you.

**Murray Stahl –** Chairman & Chief Executive Officer

We'll all have to wait because, of course, the outcome of any discussion cannot be known until the end of the discussion.

**Steven Bregman – President & Chief Financial Officer**

A follow-up question that I think you should be able to answer regarding Texas Pacific Land Trust is that in the announcement between the various parties to this conversion committee, there was agreement that there would be interim reports to shareholders on the progress of the committee. Is there anything you can tell us about the intended frequency, or when the next one might be, or the level of detail? Probably not, but I'm interested to hear your response.

**Murray Stahl –** Chairman & Chief Executive Officer

I think your assumption is correct that progress reports can be expected when there is progress to report.

**Questioner 4**

Back to Texas Pacific Land Trust: Do you feel that the right-of-way, or whatever property they sold, reduced the economic value of the company?

**Murray Stahl –** Chairman & Chief Executive Officer

Well, let's put it this way: I'm not a big fan of trading, just philosophically. So, I don't think it's such a great idea to trade any asset, generally speaking. Philosophically, I think leaving it alone is better than trading it.

Judging one parcel of X acres of land versus some other parcel is an extraordinarily difficult endeavor because, for each acre of land, you have to make an assessment of what some operator is likely to do with it. If they plan to drill, will it be a drilled but uncompleted well, or will it actually pump? If they pump, what is the gas gathering system going to be like? Should it depend on another company? If they need water, how much water will they need? That's dependent on how many wells they actually drill, and it depends on something called the lateral, which is the horizontal distance drilled—how far they're drilling. It's not uncommon now to have 1.5-mile laterals, which will obviously use more water than a 1-mile lateral.

There are many variables, and I'm not able to assess exactly which are better and which are worse. For me, I just like to leave things alone, because there are so many variables. From my point of view, and I think from everybody's point of view, they are largely imponderable, because they're in the hands of somebody else. I wouldn't undertake to make a judgment on whether to sell Acre A to buy Acre B, even if it were in my power to do so. You don't know if selling Acre A to buy Acre B will improve or diminish your value; you wouldn't know for years.

Probably a better analogy would be that some years ago, in 2014, before the discoveries in Reeves County were announced, there were people trading Texas Pacific Land Trust shares. They had no idea how big the fields were, just in Reeves County alone. No one knew. Everyone knew there was oil in that area, but they didn't know about future improvements in technology that would make it possible to access those fields. Some people sold shares back then, and they shouldn't have.

All I'm saying is that they didn't have the information, nor could they have had the information, to properly assess the valuation. The same applies to today, because the technology of what can be done in these fields is moving rapidly. If you visit an oilfield today, it's like visiting a high-tech company. In many ways it's more high-tech than the conventional high-tech companies. There are discoveries being made—I don't mean discoveries in oil—I mean discoveries in technology, literally, on a weekly basis. So, how can one assess properties? That's the issue. I would prefer to say the truth, which is that I can't really assess; I can only make conjectures, which might be reasonable, but they probably wouldn't be accurate.

**Questioner 5**

In the vein of not wanting to sell an asset, not wanting to trade it, if I think of FRMO like that and want to hold it for an extremely long period of time, my question is what are you, and Steve, and Peter doing to develop young talent as time goes on, and also to make sure that they don't want to leave Horizon Kinetics? Because over time, that's going to be so critical.

**Murray Stahl –** Chairman & Chief Executive Officer

Okay, that's a good question. To begin with, we're always looking for new people who are smart and have ideas. We prefer people who think a little bit differently than we do. You know, sometimes when you put two people with different perspectives together, it's really great.

Speaking of the people at Horizon Kinetics, I don't even remember the last time anybody left. I don't know what to do to get rid of them. They're all there. And then in terms of myself, Peter, and Steve, we keep showing up. We're here. No one's leaving. I mean, we do add people from time to time, but no one ever seems to leave. If the object is to attract people and incentivize them to stay and work within the framework we've established, I guess we've managed to do it. How we've done it, I'm not exactly sure, but we've managed to do it. We must've done something right.

**Questioner 6**

Two quick questions: With regard to Texas Pacific Land Trust, I realize you can't speak about it, but has it occurred to you that the legendary strength of you and Horizon Kinetics is more as visionaries. You're known for original insights, but not for being a tough streetfighter in an activist fight. If you get into a situation with some unsavory folks, have you considered that you might want somebody else to be the bad cop? That's the Texas Pacific Land Trust question.

As far as your observation about negative interest rates, I don't understand the idea that since we cannot withstand higher interest rates, therefore, we're not going to get them. That's sort of like saying, well, I can't retire on the assets I have, so I need to invest in something riskier in order to retire. Or to put it another way, before Mugabe died—I mean, when he was in charge of Zimbabwe—they couldn't withstand higher interest rates, but the market gave it to them anyway. So, why is it that just because we can't withstand higher interest rates, we're not going to get them?

**Murray Stahl –** Chairman & Chief Executive Officer

Okay, I'll answer the second question first because I think it's easier, and then we'll get into the streetfighter question, which is a little bit more elaborate. The words I believe I used, and feel free to recollect and correct me if I'm wrong—I believe what I said was that they, meaning the central bank authorities, are not going to raise rates. I didn't say we're not going to get higher rates.

There is a plausible scenario in which we get high rates despite whatever the central bank wants to do. In that scenario, if the debt were to rise to a level, irrespective of what the interest rate is, at which investors begin to question the ability of the borrower to either service the debt or to pay it at maturity, or alternatively, if we come to a point at which people really believe, generally speaking, that the inflation rate is not 2% and they believe that the central banking authorities are consciously trying to debase the currency, you could visualize in either of those scenarios—and those scenarios are not mutually exclusive; they can occur together—a situation of really high rates.

At the moment, the problem is that the inflation rate, in my opinion, is between 5% and 6%. I'm a minority in this case, maybe even a minority of one, and many others believe it's something on the order of 2%. I'll go into a little detail. Where does 2% come from, particularly when people sometimes have the sense that their living expenses are going up by more than 2% a year? Well, the Bureau of Labor Statistics calculates it, and that official figure of 2% is based on the chain link method. Let me explain the chain link method. Obviously, the Consumer Price Index ("CPI") is calculated using a basket of items that you can buy. People can debate what the weights should be: what weight should gasoline be? What should rent be? Although you can debate those items and arrive at different numbers, that's not part of this question.

The chain link method assumes a certain kind of consumer behavior. It assumes that people make substitutions in response to price changes. To keep it simple, let's make believe that people need only two items: chicken and beef. That's it. They don't need clothes; they don't need housing; they don't need cars. They only need chicken and beef and that's it. Let's say in a given week, one will consume 3 pounds of chicken and 2 pounds of beef. Let's further assume that chicken costs $3 a pound and they consume 3 pounds so that's $9. Beef costs $4 a pound and they consume 2 pounds, so that's $8. That comes to a total of $17 for the week.

Now, let's say that the price of beef goes up to $5 a pound and chicken stays at $3. Okay, now it's obviously $10 for the beef and $9 for chicken, so you went from $17 a week to $19. That's roughly an increase of between 11% and 12%, but let's call it 10% for simplicity. In that case, you could say, arguably, that inflation would be 10%. That's not the chain link method for calculating inflation. In this example, we price-weighted it, but that's not the only way to weight it. We make an assumption about how many pounds of chicken or beef people consume, and people might make different decisions. You understand what the problem is. Also, keep in mind that in the world of the CPI, it's not two items, it's hundreds of items.

The authorities decided that they would not calculate the inflation figure that way. They chose the following method. Again, for simplicity, let's assume a basket of only two items: chicken and beef. In the chain link method, if the price of beef goes up from $4 to $5 a pound, it is assumed that the average person would reduce their beef consumption and increase their chicken consumption. Instead of buying 2 pounds of beef, they would only buy 1 pound of beef at $5 a pound, and they would increase consumption of chicken from 3 to 4 pounds at $3 a pound, which comes to $12 for chicken. At $5 for beef and $12 for chicken, the total is the same $17 as before the beef price went up, so the conclusion is that there's no inflation. Think about it. There are two items; one remains constant, the other goes up by 25% from $4 to $5, which is roughly a 10% inflation rate. But with the chain link method, it is assumed that consumption of one item is cut in half, resulting in a zero inflation rate. That's how they do it.

I don't agree with using the chain link method, because I don't believe it represents the inflation rate. But the majority seems to accept that method. Until we have the situation in which people agree with me—and you may be waiting a long time before you see anything like that—no one will be particularly concerned about the inflation rate. In the scenario where people are concerned about currency debasement leading to higher rates—you can get higher rates, I'll agree with you—but they're not there yet intellectually. Maybe they'll never be there.

**Questioner 6 (cont.)**

Did you read and have any response to Ray Dalio's piece about paradigm shifts in which he said that they're demonstrably unsustainable and, therefore, that gold will do well? And I guess he would've said bitcoin if he believed in bitcoin.

**Murray Stahl –** Chairman & Chief Executive Officer

Well, that part I believe in. We'll get to the streetfighter question; I haven't forgotten about it. But first, I'll address this issue because you just posed it. I more or less agree with the gold thesis. I would, however, add this much to it from my own perspective: that the worldwide reserves of gold and silver are declining because, at current prices, none of the miners have the wherewithal to open new mines. And even if they did have the wherewithal, it takes years to develop a new mine. If tomorrow morning, the big gold companies decided that they had the sites and they had the capital and they wanted to develop them, it would be years before we'd see new supplies.

By the way, as an aside, although I like gold, the reason I prefer bitcoin to gold is that if the gold price were high enough, there would be more gold. The gold supply is not fixed. Bitcoin is fixed at 21 million units, that's it. In the long run, if you're interested in something to provide an antidote to currency debasement, and assuming there are ways to trade it, custody it, and make it convenient for people to use—which they're working on but it's still cumbersome, to say the least—I believe that the value of the fixed issuance cryptocurrencies will rise a lot higher than that of gold. But that's not a tomorrow proposition.

Now, back to the streetfighter part of your question. First, there's a presumption in your question that I won't take it in a pejorative sense; rather, I'll take it in a complimentary sense. If I can choose to have alternative phrasing, though, the presumption is, you're basically a nice guy, but there occasionally comes a time when you just have to punch somebody in the face. And maybe you'll have to do more than punch them in the face. Maybe you'll have to punch them in the face, knock them down, and stomp on them a few times so they get the message that you're not kidding around.

From an activist point of view—and maybe it is a pejorative thing to say about myself—I'm capable of it. I can do it, but I don't think it's such a great idea to do it, because it causes a lot of collateral damage along the way. The library is replete with case studies of people who waged this fight, this street fight in the courts. That altercation takes however many months and, at the end of the day, I've never really seen a long-term result that's desirable. Usually it is just a question of the streetfighter saying, "I want you to engage in a certain transaction. If you do it, the stock will be X percent higher, I'll sell it, then move on." That's what the streetfighter does.

But if, instead, you recognize an extraordinary asset that needs to be developed over the course of many years, or maybe many decades, I don't know what you can accomplish using the streetfighter approach. Because there's no one transaction, even if you could force somebody into undertaking it, that would radically change the value of the asset. You could debate one particular change or another if you want to, but at the end of the day, what will increase the value is the development of the asset. In the case of Texas Pacific Land Trust, development of that asset is not entirely up to the trustees. Pipeline companies make decisions about where the pipelines will be built. The oil and gas exploration companies must decide on the kind of technology they'll use, how deep and how long the lateral will be, whether they will have pads or not. The other companies will decide whether they want drilled but uncompleted wells, as many of the wells currently are, which means they drill the, but they don't yet pump the hydrocarbon.

Let's just explore one of those items. There are a lot of drilled but uncompleted wells on the Texas Pacific Land Trust (TPL) property. That means some oil company drilled the well, they paid the easement charges, but they're not pumping. At that point, TPL can't collect its share of the royalty. The easement is a very small part of it. If the wells were pumping, which means they're fracking, then they would be using a lot of water, too. But if the well is drilled but not completed, TPL won't be selling a lot of water, because the oil company is not yet fracking. Those circumstances are not within one's control.

The streetfighter has a role in that sometimes there are companies where management is acting in a manner completely adverse to the shareholders' interest, and they must be confronted. I don't think TPL is in that situation; that's not my assessment of it. If I thought that was the circumstance, maybe I'd be a little bit less of a nice fellow than I am right now. I try to be diplomatic and nice to everyone. Maybe it's a deficiency in character, I don't know. But for the time being, I'll keep being like this.

**Questioner 7**

From when you first invested in bitcoin and other cryptocurrencies two or three years ago compared to today, would you say the risk profile is higher or lower now, considering the added exposure with big banks and large investors?

**Murray Stahl –** Chairman & Chief Executive Officer

Do you mean the probability of success?

**Questioner 7 (cont.)**

Yes.

**Murray Stahl –** Chairman & Chief Executive Officer

I would say the probability of success is much, much higher, because just look at what has happened in just the last several weeks. The SEC approved an institutional ETF called the VanEck Solid X Bitcoin Trust. I don't know if it is operating as of today but, in due course, it will be. Recently, we had the opening of BAKKT, the Intercontinental Exchange's digital asset custody system for physically delivered futures contracts. They plan to launch their bitcoin futures contracts on September 23. I can't stress how important that is, because right now, trading bitcoin, and cryptocurrency in general, is unregulated.

Unregulated trading means that traders have the possibility of engaging in wash sales. Theoretically, two people can take a bitcoin and print trades back and forth, but they're not economic. No money is changing hands. If I give you a bitcoin, and you give me a bitcoin, and we say we've exchanged things at a certain price, but we never cleared a trade, and no money was exchanged, what does that price really mean? That's why a regulated exchange is so important. If there's a wash sale on a regulated exchange, keep in mind that the exchange is a self-regulatory organization that will discipline people who engage in wash sales. And they might even permanently stop them from trading, or they might impose even more egregious penalties.

We will know, maybe not the first day, but in short order, what the real price of bitcoin is, not what is reported by the 2,300 so-called exchanges. There's a lot of progress being made. So, yes, there is a much higher probability of success right now than there was just a couple years ago.

**Questioner 7 (cont.)**

Okay, so based on that, do you think we can have some added exposure to bitcoin or other cryptocurrencies in FRMO?

**Murray Stahl –** Chairman & Chief Executive Officer

Well, we're constantly gaining more exposure, because we are mining bitcoin and certain other cryptocurrencies. Generally speaking, we keep whatever coins we mine for FRMO, so the exposure is going up naturally. We have ordered more mining machines, and we will continue to keep the coins that we mine with those machines. We recently bought some coins in the open market so, little by little, we are increasing our exposure to it.

In addition, FRMO purchased a very small interest in a hosting and repair facility. The bulk of it is owned by Horizon Kinetics, but FRMO has a small interest in that entity, and we're exploring some other transactions. We just don't want to make a bet and say we're putting $20 million into bitcoin, because we don't need to do that.

What I usually say about allocation decisions when asked about investing in bitcoin, is for them to consider a certain type of vacation experience that just about everyone has had. They went on vacation and the food was bad, and the weather was bad, and the hotel was bad, and the flight was bad, and everything was bad, and they really should've stayed home. But they spent a certain amount of money on the trip, which is a total loss that can never be recouped. That's the amount of money to invest in bitcoin, because they survived that vacation and life went on.

What is the return potential? In my opinion, it's possible to make 1,000 times your money. If somebody had a million dollars in bitcoin, and if it worked, they could end up with a billion dollars. You know from the Shareholder Letter that our exposure, when it's all added up, direct and look-through, is more than a million dollars. I don't remember the number off the top of my head, but I it is certainly more than a million dollars. Take that number, multiply it by a coefficient expansion of 1,000, and that's what it could be in success mode.

Now, I don't want to promise that, and I have to caution everybody—you know, I don't want anybody to be giddy, and every time I talk about crypto, I say let's be serious, it could still fail for any of a host of reasons. But you're asking about the success version of the story and whether our exposure at the right level. The way I interpret the thrust of your question is that you're asking if our bitcoin investment is at the right level such that, if it were to really work, would it do what it needs to do? Well, that's the coefficient expansion that I think is possible. The exposure level is in the shareholder letter and we are increasing it, albeit, gradually, and I think it will have a meaningful impact if it works.

**Questioner 8**

Would you share your opinions on the tokenization of securities and if you think that will affect securities exchanges in the future?

**Murray Stahl –** Chairman & Chief Executive Officer

I believe that every security that trades will ultimately be tokenized in one way or another, via blockchain technology. Beyond that, I believe that certain assets within companies will be tokenized as well. So, instead of issuing a bond, what might happen one day is that some company will say: "I have a product that you'll need three years from now. I'll sell you a token that entitles you to a certain amount of the product when you want it, because you already effectively paid for it." Those tokens will be tradable. I think it's inevitable that every security will be tokenized.

The secondary question is, if that's true, will it eliminate the exchanges? I don't believe it will. I think it will enhance the exchanges, because you can change the technology radically, but you can't change the people who trade the securities. That's one reason why history so interesting. If you read history and you think about people 1,000 years ago or 5,000 years ago and, in that vein, you can read the Bible with great interest, because even though we live in very different times, people are the same, the stories and behaviors are the same. Human behavior keeps exchanges relevant. People are capable of all sorts of ways of gaming the system, especially if you allow what they call in English "naked access," that is, access to the exchange without an intermediary to observe and record the transactions.

Every transaction is theoretically information content, and people base subsequent trades on the valuations other people establish. Wash sales create a lot of information that is not authentic; it's pseudo-information that distorts the whole marketplace. Tokenization without several regulated centralized trading arenas defeats the whole purpose of tokenization, because so much of the information content might be pseudo-information. I think the tokenization of assets and securities is a great thing for exchanges. In point of fact, the Chicago Mercantile Exchange is not resisting bitcoin; it has developed bitcoin futures, which is no small effort. The Intercontinental Exchange is not resisting bitcoin and cryptocurrency; it's providing custody for it—making it easier to own. I think it's fair to say that the exchanges see opportunities in this arena.

**Questioner 9**

Will there be an ultimate winner in the public relations war between Grayscale's bitcoin ad campaign and the World Gold Council? Or will it be like the Yankees and the Red Sox?

**Murray Stahl –** Chairman & Chief Executive Officer

There is a dispute over gold versus bitcoin. That's really the thrust of your question. I wrote about this, so I'll summarize my view. To me, it's a dispute with no purpose, because gold can never be a substitute for bitcoin, and bitcoin can never be a substitute for gold. You could say that they're both stores of value. I think that's fair. But they are stores of value for entirely different contingencies.

For example, if you're worried about conventional inflation, no matter what rate you forecast, I think crypto is superior to gold. The reason is that if gold prices rise to a certain level and the technology of mining gold improves, theoretically, it's possible to extract more gold, and history certainly confirms that behavior. If gold is used as a form of money, you could actually get a form of debasement with gold, even though it's not through a centralized authority.

In classical inflation, cryptocurrency—perhaps bitcoin—is the winner. However, gold is also a store of value in an entirely different contingency. Let's say we had a situation in the world akin to the Second World War—some type global conflict. Cryptocurrency is dependent upon the internet. The internet can't exist without telecommunications cooperation among all the countries in the world. If you really believed there was something analogous to World War II happening, how would you be able to move your currency? You wouldn't be able to do it. Gold had the faculty that you could hide it, you could disguise it, you could bury it. In the necessary circumstances, you could move it to a neutral country like Switzerland, for example. If you believed there was going to be some serious political unrest in the world, I wouldn't recommend buying cryptocurrency; I'd recommend you buy gold.

We don't know if we'll have classical inflation, or whether we will just have continual debasement at the current rate. We don't know if we'll have a serious political problem or not. Logically, you want to prepare for all contingencies and, therefore, I would say gold is complementary to bitcoin, and bitcoin is complementary to gold. It's not either-or. In point of fact, although I clearly believe in cryptocurrency, we have fairly large exposures to goldmining companies in our accounts.

**Questioner 10**

Getting down to the nitty-gritty of FRMO itself and the assets of FRMO, a big chunk is Horizon Kinetics itself, the investment management business. How is that business faring given the commoditization of investment management?

**Murray Stahl –** Chairman & Chief Executive Officer

Of course, we don't know what the future holds but, year to date, our earnings at Horizon Kinetics are higher than they were last year, so we're doing reasonably well. The reason is we're not giving up an existing business; we're just figuring out new ways to use the skills we have. I would say that we're navigating a lot better than most asset management companies.

Look at publicly traded asset management companies and look at all the asset outflow. You know, of course, that some are better than others, but the earnings are down quite considerably for most of them. So, we're going to continue on this path.

**Questioner 11**

I know you commented in the past on this, but what are your views on the trade tariffs and the potential impact on the economy and the market?

**Murray Stahl –** Chairman & Chief Executive Officer

I won't give you my personal preference; I'll be apolitical. All we know is that there is a trade tariff and there are two schools of thought on the matter. One we'll call the Trumpian school, which finds the tariffs necessary. Then there is the other school, the classical school of trade theory, which is the law of comparative advantage. The law of comparative advantage views tariffs as disastrous because, in the absence of tariffs, every country specializes in what they do best, whatever that happens to be, and the global well-being is increased when each trading partner does that. So, you don't want to distort the market by imposing tariffs.

However, in this particular instance, we need to say a couple of things. The first is that China actually has barriers to competition: tariff barriers and non-tariff barriers. So, let's look at it just purely mathematically and apolitically. The United States could say: "We don't believe in tariffs." And we wouldn't have any tariffs; but China has them. I don't think that's a tenable position. China won't relax its tariffs, no matter what happens.

Secondarily, with regard to how much it might or might not damage the economy, here are some of the numbers. The United States has a trade deficit with China of over $500 billion. Let's say, for the sake of argument, taken in its extremis, that China doesn't sell anything to the U.S., and the U.S. doesn't sell anything to China. From pure national income accounting or GDP accounting, that means a $500 billion trade deficit is eliminated and the GDP, from purely an accounting stance, rises by $500 billion. If America sold nothing to China whatsoever and China sold nothing to America, the US GDP goes up by $500 billion, or 4%. Knowing that, you could see why the administration is so aggressively pursuing this.

What does China buy from the United States? Out of the $120-odd billion worth of goods that China buys from the United States annually, the biggest single item is Boeing aircraft. I don't remember the number exactly. It's something like $15 billion. So, crudely speaking, more than 12% of what China consumes is Boeing aircraft. Why? Because they need the planes and they don't make them, so they'll buy them no matter what.

They buy other goods, but only what they actually need. The U.S. is in a very different position because it's not that China is exporting so much to the U.S., although they do, of course, have companies that export to us. What makes it so problematic for the U.S. is there are American companies—Apple's iPhone is a good example—that make or assemble their products in China and send them over here. It's an American company, but since the product is made in China, the profit is recorded in China, and the U.S. gets no tax revenue for it. China actually does get some tax revenue for it. If there's no tariff, what is there to prevent Apple or anybody else from moving even more production there?

The tariffs are a reaction against U.S. companies moving production to China, and it's a very difficult problem. The president claims—remember, I'm being apolitical and trying to be fair to both sides, and I'm certainly not here to be a spokesman for the president—from that unique vantage point, he has the power under the Emergency Economic Act of 1977 to compel U.S. companies to cease producing in China, if he so orders. That's a pretty big problem from the Chinese point of view. It's also a pretty big problem from the perspective of the S&P 500, because there are so many companies in the index that make goods in China. If they had to move production elsewhere or to the U.S., their costs would be higher. It's not likely they'd be able to pass very many of those costs on to U.S. consumers. Ergo, their profit margins would decline.

As a matter of fact, in the last ten years, one of the major reasons for the rise in the return on equity of S&P 500 companies, now at a record level—along with record-level profit margins as well—is that they've been able to manufacture a lot of product in China at much lower prices and not pass any of the benefits on to U.S. consumers.

Anyway, that's the argument. You have the classical trade theory argument that to put on trade barriers is an inherently pro-recessionary act that would cause a recession—and it's happened many, many times; you can't dismiss it. The classical example of international trade theory is the Smoot-Hawley Tariff of 1930. But there are many other examples.

Those who argue against tariffs have a lot of historical evidence on their side. But the other side of the debate reflects the current circumstance of trade being so imbalanced that there's nothing the Chinese can do that would erode their position, from the U.S. point of view. Anyhow, I hope I've given both sides.

**Questioner 12**

This has been great, and I have so many questions, I don't know where to start. I will comment that some of the things you've said remind me of that opening line from *A Bubble That Broke the World*. That God giveth increase but man created credit, and that this is sort of the essence of it. My question is: you've got a very inflationary stance, right? That debasement is going to come through inflation. But why isn't it going to be deflation, and why isn't it going to ultimately be deflation taxation? Because, when you think about the interest rate problem you've identified, you can invert that and say well, wait a minute, that $3.5 trillion or whatever is actually income earned mostly by Americans, right? And mostly by older Americans. And that the real problem, in a sense, is that assets don't create enough income for people who want to retire.

What do people do? They save, and they keep building more and more assets. The more they save, the less they spend, basically. Asset prices continue to rise, and income continues to go down. We've seen this in multiple countries like Japan, Germany—everywhere where we see even more demographic shifts than the United States.

If that's the case and you have a group of people who are sort of indifferent in a sense, then there's no interest rate. I mean, that's what negative interest rates are saying. There's no interest rate at which you can get somebody who's looking at how do I support myself without working anymore to pull forward the consumption, right? What you wind up with is a deficit. It's essentially the Keynesian paradox of thrift problem. Historically, the way we've solved that problem was two things: higher taxation in a sense, although you can argue it didn't really work; and war, which destroyed a whole bunch of physical capital and required a whole bunch of assets, which then required a different change.

Why do you think we're going to get inflation and not a deflationary situation as we continue to see an aging population with more people trying to sustain themselves without working?

**Murray Stahl –** Chairman & Chief Executive Officer

That's an excellent question. Before we get to my conception of history, I'll start with my conception of economics. In economics, somebody establishes a premise that if you do X, people will do Y. For instance, if you raise rates or lower rates or whatever you do, people will do something in response; they'll save or not save or emigrate. Very frequently, though, those propositions prove not to be the case.

The classical historical example is in the period subsequent to World War I, when the nations of the world—not the United States so much, because we only played a very small role and only at the end of the war—ran up enormous debts, including Britain, France, and Italy, too. The governments honored those debts. There were years of inflation but, for the most part, the1920s was not an inflationary period. I mean, there are the years, the year or two after the war, the recovery period, when there really was inflation, but you can excuse those. And there clearly was inflation during World War I.

I've mentioned earlier my hobby of reading newspapers and periodicals from the past. If you read the *Wall Street Journal* from that time, or you just read investment periodicals of whatever country, people felt that they were cheated. "Yes, we lent you £1,000, and you gave us back £1,000 with the appropriate degree of interest, but it doesn't buy £1,000 worth of stuff." You'll see the term "prewar parity" over and over again in all the post-World War I economic literature. What they meant is that they wanted their purchasing power to be reestablished at the August 1914 level.

In a lot of countries, starting in the late 1920s and certainly to the 1930s, there was a conscious effort to deflate. For example, in 1925, when the British revalued sterling, that was basically a form of deflation. The idea was that with the inflation that came during the First World War and the first couple years after, British products were too expensive. They wanted to make them cheaper, and their method was to revalue the pound sterling. In theory, even though they knew that wages would come down, the intent was that the price of everything else should come down symmetrically. If wages came down 20%, that should be no problem, because food prices would likewise come down 20% and rent prices would come down 20%. But it didn't happen that way, because there was a limited supply of housing, and people had to live somewhere so, with high demand and limited supply, the rents were not lowered.

In 1925, the reaction against the revaluation of sterling was a general strike in Britain. The entire country went on strike. It's incredible to think about that. And it was the real birth of the power of the modern Labor Party in the U.K., that's what it came from. I would argue that the U.K. never recovered. Similarly, France and other countries experienced the deflationary pressure, and it was so extreme that it turned the people of those countries  against their governments. You could argue that France, for example, was virtually ungovernable in the 1930s.

There was one country that didn't pursue that economic approach. What country was that? Nazi Germany. That country took a completely different view. When Hitler came to power, Nazi Germany started borrowing tremendous sums of money. How did they do it when the credit of the country was horrible? Well, they created a separate agency. The government couldn't borrow any money, so they created this agency called MEFO, which is an acronym for Metallurgische Forschungsgesellschaft. MEFO didn't have any assets, so when they ordered weapons, they paid with a note called a MEFO note.

Why would a company even take such a note as payment? Because they could go to the central bank of Germany, the Reichsbank, which would exchange it for money. The Reichsbank would take it. It should have inflated the economy, but it didn't actually inflate. Why? Because they had a price regime and government regulators. If you raised your price and they didn't like it, well, you can imagine that the result wasn't too pleasant.

I want to give you a sense of history. The last time countries tried the deflationary tactic, they came well near close to destroying civilization. I don't think it will ever be repeated. When you read the literature today on the theory of central banking, everyone is very cognizant of what happened in the 1930s. I don't believe that anybody would want to experience deflation like that ever again. You've heard the term "helicopter money". They say if it really comes to it, we'll throw money out of a helicopter and into the streets. I believe they're serious about that.

So, I don't believe in the deflationary scenario. I could be wrong, but that's the background. Maybe it's more information than you wanted, but there you have it.

If there are no further questions, we will close the formal part of the meeting. I'll be here with my colleagues for a little while, and you can engage us informally. Thank you all for coming and being such supporters. And, of course, we'll reprise this in the quarterly conference calls, and we'll be here again next year.

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