

ESG: DOES IT ADD VALUE?

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- What is ESG, and why should analysts care?
 - How can weaving ESG factors into your investment analysis reduce your portfolio risk and increase your return potential?
 - Where do you draw the line in ESG factors, and how do asset owners view ESG?
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HAROLD BRADLEY: And Chris and I have been strategizing about how to keep everybody awake. And we're welcoming a global audience who want to watch Chris talk a little bit about ESG investing, which, I've read through all the materials, and it's never spelled out. It's environmental, social, and governance. And the question is, does it add value? And so, we've already had a little pre-debate, but I'm going to let Chris lay out his case. And my name is Harold Bradley. I have been working with the CFA Institute — I was just talking to Julie — for about 24 years, which just stunned me because that really does date me.

At any rate — and I'm a member of the Board of Regents for this seminar, which I find to be one of the more valuable uses of my time every year. For people in the room, we're going to try and hold the questions, unlike the earlier presentations, to the end because it's smoother for the broadcast purposes that we have here. And then we will have a question and answer session. And there is a chat area online at the CFA Institute website for viewers, who can enter questions to the speaker, who are not here in the room with us — our virtual audience.

Chris and I met — one of the things that Julie likes to do is have board members who know the speakers — for the first time in 2007, to the best of my recollection, in a meeting room at the Milken Institute in California where there were about 16 people sitting on — you know those lunch tables that are just kind of strung together end to end? We're in the big perimeter. And he was the big dog in the room. Still is. And then there were a number of smaller state fund

managers and a few endowments. I represented the Kauffman Foundation in Kansas City, which was a motorboat at \$2 billion. Chris manages over \$200 billion now for 900,000 teachers, community college folks, pre-kindergarten teachers who depend on him for their retirements.

So, I think he's got a really hard job, because if investing was just one thing, you'd be in great shape. A lot of money and a lot of worry. But when you've got bosses who represent all those folks and politics and other stuff, I do think that Chris has been in that position for a very long time and very effective at what he's done on behalf of people who depend on him in the state. And he would be, to me, a classic asset allocator the way they're managing their money — and he can talk about that — but introducing Chris to talk about environmental and social and governance factors, what does it mean? And especially to a fund that has 70% of its US equities passively invested. So Chris, it's all yours.

CHRISTOPHER J. AILMAN: Thank you very much. And I want to make sure that — it's the afternoon after lunch. Many of you just traveled here, so I want to keep it entertaining and keep you guys awake. And first I have some questions for you. I'm curious, when you think about ESG — so environmental, social, and governance — If I can see a show of hands, how many of you think that it actually is important and you integrate it into your investments? So for the audience, I'm going to call that 40%. That fair?

How many of you think it's actually for the birds and just a bunch of junk? Be brave. Harold's going to be my challenge like he was earlier. All right. And for the rest of you, I'll assume you're kind of neutral on it, so I'll go into that. I looked through the list of speakers, and I have say, it's pretty amazing. You've got speakers from Harvard, from Yale, from here, the University of Chicago Booth School, from the University of Pennsylvania — some of the best schools in the country.

I am, as far as I could tell, the only person on that list that went to school at the University of California at Santa Barbara. But what I will tell you, though, is the value of that is, is maybe I'm not the smartest person in that group, but I was the smartest one to go to college at the beach. And it takes discipline, because I got challenged by Tom Keene of Bloomberg once on this. It takes discipline to actually study microeconomics on the beach in the sand, drawing your supply/demand curves in the sand.

It was a lot of fun, though, but it's been a challenging — and I have been at CalSTRS for a heck of a long time. I've been a public funds CIO for about 30 years. I have just been pounding my head at the defined benefit challenge. So, I know some of you in the room... like Carol was challenging that earlier. We can get into that a little bit. But when you think about ESG — and I think that part of it is the challenge that words matter. I threw some of them up on the wall — impact investing, SRI investing, sustainable investing. I think the one that drives me nuts the most is responsible investing, because the question is, what does that imply all the rest of it is?

I've seen some friends, particularly the Dutch funds and some of the European funds, that have an assigned staff that's the responsible investment staff. And that's what I always ask them. Well, if that's the responsible investment staff, who the heck are all these people? Irresponsible investment officers? So, it's kind of a challenge. And words matter, and so does the context. I have a friend that has horses, so sort of a sad story. He was transporting a horse in a van and got in a horrible accident, and the horse was badly injured. The CHP got there and unfortunately had to put the horse down and help him.

Amazingly, the insurance company fought him on his medical insurance, and he ended up in court. And he relayed this example to me where he was in the courtroom and the insurance company was attacking him and said, "Well, but wait a minute. We see all these injuries. You said you had broke your leg. You broke your arm. It was a horrible thing. But isn't it true that when the highway patrol officer came up to you and asked you how you were doing, you said, 'I'm fine. I'm perfectly fine?'"

And my friend had to say yeah, that's true. I did say that. But wait a second. It's the circumstances that matter. And the judge let him say, well, explain the circumstances. And he said, well, you have to understand, we got in this horrible accident. The horse is thrown out. I'm thrown out of the car. And the CHP officer pulls up, looks at the horse, and says, "Oh, how are you doing?" Pulls out his gun and had to put the horse down. And then he walked over to me and said, "How are you doing?" So words matter, and how you say them matter.

The other two at the bottom — and I know it's hard to read the slides in this room — double bottom line and triple bottom line. I've always said there's just one bottom line. That's making money. Double bottom line, that you can make money and do something else. I believe in fiduciary duty. In the United States, it's pretty absolutely clear, it's fiduciary duty is the bottom line. It's nice to try and do other things. But the minute you have two goals, you're serving two masters. And I don't think you can achieve both as effectively.

That said, I've seen conferences now for triple bottom line. I don't even know what the third bottom line is, but there's something else that's supposed to be out there. But that doesn't mean that you can't — that you're allowed to ignore those. And I think that's the big fiduciary bait in my world, in pension plans in the USA, is, oh, if I only care about return, then I can ignore everything else at all cost. And I argue no. In fact, you have to pay attention to some of the other things, and they matter. So I'm going to ask the CFA Institute staff to cue up this video. This is from Ontario Teachers', the other teachers' plan in North America.

SPEAKER 3: At a minimum, the [INAUDIBLE] are actually investing with an eye to finding companies that are not doing harm.

SPEAKER 4: What we want to be asking is whether there are ethically better or ethically more admirable ways to invest.

SPEAKER 5: I don't think it's revolutionary. I think it's evolutionary. But when I think about responsible investing, I think about common sense. Responsible investing is that you don't pay —

CHRISTOPHER J. AILMAN: So, this is a tagline ad that they did a, I think, a half an hour or an hour-long show with public broadcasting in Canada. And Teachers' has done a lot of very provocative and thought-provoking things up there, so I really give them a lot of credit. There's a couple things in that ad I agree with and a couple things I don't agree with, and we'll get into that. But you can definitely tell it's Canadian, with the hockey and the ice hockey influence, which I really like. So my question for you — I don't have a — I'm not going to grade you, but my question for you is the first on those sheets of paper. How would you guys describe ESG investing?

So, Harold pointed out I didn't label the name ES and G, so shame on me. But think about that. Take some time, please. Write it down.

CHRISTOPHER J. AILMAN: I know. No. Take some time to write it down. How would you describe integrating ESG factors into your investment analysis? Do we have Jeopardy theme music? Dun dun dun dun dun dun. And so for our global audience, if you could write down what you think ESG means. So, at the end I'll ask you guys to share some of those ideas, not now. I still see a few people writing.

Let me frame the discussion a little bit, that helps me. Obviously, CFA Institute is very big on financial ratios. Very, very big on financial analysis. All that fundamental stuff, as we were talking about in exam one and two, and it's all about the accounting statements. And I would argue that when you think about the balance sheet, the income statement, particularly in the United States, they're a point in time or for a time period backwards. And by the time they're published, you're often talking about data that's three to four, even, in some cases, five months stale, but it's backward-looking information.

So, you're doing financial analysis on old data looking backwards, but you've got to invest looking forwards. So, what do you do to do that extra research to understand that? You look at the MD&A. You look at statements by management. You look at interviews by management. But I think one of our concerns when it comes to ESG and a lot of the data in the management discussion and analysis, MD&A — it's boilerplate. It's been cleansed by the general counsel. It's been cleansed by the corporate attorneys because they're so worried about some statement will be used by an investor. And then it won't turn out to be true, and so then the company will get sued.

And to me, a lot of the MD&A is just useless. I could just toss that out. I'll look at the footnotes. I think that's kind of interesting, because that's where the accountants have probably pushed them

a little bit, but a lot of the ESG data isn't even in those documents. So to me, we're going to do financial analysis. We're going to rely on a lot of those multiples. But we also recognize they're backwards looking, and what we want to identify is what's forwards looking.

When I think about ESG, the way I interpret it and the way I describe it, it's interesting. When I talk to — I'm going to pick on, say, on the equities side. Anybody here a deep value investor in equities? Nobody. They don't come to the class. They know everything. We brought in a one of our deep, deep value guys. Brought him in to meet the board and contrasted him with a growth equity investor. On the growth, guy had his PowerPoints and his iPad, and he's throwing up stuff on the board. And everything's about charts and about growth.

And then the deep value guy walks up with an old yellow pad and flipping through it. Doesn't even know how to do PowerPoints. He's not even there yet. And we kind of said to the board, that's the cultural difference between those two worlds of value and growth, but the growth people are the ones that — or the value people are the ones that care about price and they care about risk. And at least the ones we talk to, they'll go out and actually meet with the company. They'll look at the supply chain. They'll actually interview the competition. They really tear into, deep into what's going on in the company.

Think about a credit analysis. Anybody here do credit, fixed income credit? So, a good chunk of you. You've got all the financial ratios on your Bloomberg. You've got all the data there, but you know that's really not good enough. When you're trying to discern between a pair of companies, you're really — and you're not looking at, no offense, but S&P and Moody's. You're trying to tear into more of the deep credit analysis and look at the risk and the long-term risk of that company. What could impair that bond? What could pop up? Because you don't have a lot of upside in capital appreciation.

You're really hoping for — obviously, that's going to come in interest rates or spread, but you're really worried about the downside in the negative news. And then lastly, the other area I actually see this a lot is in private equity. Most people would not equate ESG with private equity at all. But when I talk to private equity firms, they don't use that term, but what they describe is business risk. They really care about, if we own this company, what surprises can happen to us? What things can happen to us?

The one thing I think they have in common is most of those people tend to be longer-term holders. They're not traders. They're not flipping. They're really in these investments for a long time, and so they're more focused on what I call black swans. I was at the CFA Institute conference in Philadelphia, and I tried to learn about gray rhinos. I'm not sure I still get gray rhinos, but I know that's our cool, new term for outside risk. So to me, I describe ESG risk as actually long-term, operational business risk, material operational business risk.

Would it surprise you if you go back into the early 2000s and you look at Chevron, Texaco, ExxonMobil, and British Petroleum? I think if you would ask most people, they would remember the British Petroleum green ads and the little leaves growing up and how green and wonderful. And most of the public thought that British Petroleum, BP, was a more environmentally friendly company. But if you tear through their disclosures and looked at accidents on their drilling rigs and near accidents, what you would find is that ExxonMobil and Chevron/Texaco per year, those numbers usually were in the high single digits or at least in the — below 20. I think it was 15 or below.

But then, if you flipped it over and looked at British Petroleum, the numbers were in the hundreds, high hundreds. Didn't tell you that Deepwater Horizon was going to happen. Didn't tell you that they may have a risk, but it gave you a clue that if you bother to track that, OK, these guys are not as efficient and maybe they're actually a little bit sloppier in what they're doing. Clearly the US companies are keenly aware to what's going on. So if you're a credit analyst, to me, that's a little bit more in depth and a little bit more understanding.

Think about a SWOT analysis. And you know management does this ad nauseum all the time. Take the retreats and let's do a SWOT analysis. The opportunities and the threats, those are long term, and they're external. And they're thinking about it. When we talk to management offline, out of the room, quietly, they're thinking about these 5- and 6- and 10-year risks to the company. But as Harold and I were talking, they can't do much about it, because what they care about is the next 90 days and the corporate earnings. And they know what things they probably should do over the next 5 to 10 years, but they're not going to take the time to do it now because it's going to hurt earnings. And they're not going to disclose that because they don't want their competition to know, but they also don't want shareholders to get upset with them.

So I would say, in your definition of ESG, I would actually start thinking about it and translating. Get away from responsible. Get away from double bottom line, and think about it as material, long-term operational risks. And when you describe most of those — again, in private equity, in credit, in value investing, and I'm sure there are lots of other places where this occurs — when you describe it in those terms, people won't use the phrase ES and G. But almost always, I find I can label those things back into an environmental risk, a social risk, or a governance risk. That's part of the challenge, is, to me, the words get into the way — in the way. The words create a problem.

One of the hard things about my definition versus other people's definition — and I'm involved in the UN — or now it's called the PRI, the principles for responsible investing — almost every money manager in the USA has signed up. And I will say — because I've been involved, I was on their board for a year — almost every money manager in the USA signed up and then hasn't done a darn thing about it. There's about maybe 5 to 10 that have actually tried to do something, but that's been the PRI's challenge, is, OK, now that you've signed up and paid your dues — thank you very much — what are you going to do? How are you going to integrate it?

But part of the challenge is, when I go to their conferences, I interact with groups that care about deep, deep supply chain problems. And these are real, serious human problems, but they're deep, deep in the supply chain, maybe some part of a product that a company makes. There are people that care about farm animals and factory farming. That's an issue, but is it something that should be front and center in my portfolio? I don't know. And so I think what I find when I look at my definition of ESG, it doesn't meet as much with their definition. And I think that's where the confusion comes in, is that ESG becomes so extreme. It becomes every issue.

In that video, they talked about companies being ethical. You're going to have a discussion on being ethical. And I love some of the examples. I think there's another one coming up about — maybe tomorrow or the next day — about behavioral finance, and he's got some great slides. Because it's kind of the challenge. Ethical is depending on the country and your origin and a bit on your perspective. I think we can all agree about what's the broad issues that are right and wrong, but it's all those gray issues that make life really challenging.

So in my example, you can't cope with every single issue. You can't expect to solve every single issue. I think also in that video they talked about a company being sustainable. That's when you get into time periods and time frame. How long does sustainable have to be? And that's where the challenge is also in definitions. So, let's all say we agreed in this room that at some point, the oceans are going to rise. We don't know how much they're going to rise. Is it one or two inches, or three or four feet? And we also don't know when it's going to happen. Is this a 2025 event? 2030, 2050, 2075 event?

And as investment professionals, you need that bit of information. What's the size of the consequence? What's the size of the risk, and when is it likely to occur? I've said on TV many times where we've been right, but we've been way too early. And my point is, being right too early is indistinguishable from being wrong. And you guys know that. You're going to have a slide, I think, on career risk, of sticking to your convictions versus career risk, and so time period matters. You've got to know the level of the risk, and then you've got to know when it might occur. So, I think the one thing that's been missing out of this whole ESG discussion is actually materiality.

So in my example, there are horrible issues going on with human trafficking in Thailand, the Taiwanese fishing industry, different places like that. It's a global audience. Maybe somebody'll tweet in about that. But that's a problem. And it impacts, I think, our dog food or cat food industry and a few other places, is that material? It's important, but I don't know if it's material to an investment decision. The number of accidents in an oil and gas exploration company, that's probably material. But the questions that we get in some of these groups, I have to come back and say, OK, wait a minute. Is that really material to that company?

We had a major issue with a bunch of teachers. And believe me, teachers like to tell us about all their problems and things they're frustrated with, so they call us. It was a company that made a product

that went on strawberry fields. And strawberry fields are actually a big deal in central California, and particularly along the coast in California, and a lot of the strawberry fields are right up against schools. And one of the concerns was, this chemical could be bad and could cause cancer.

Well, the chemical it was replacing burns a hole in the ozone. So, it's kind of like, well, which one's worse? But boy, did we hear from teachers. It was one product used on one crop. This company owned over a hundred pesticide products. The company happened to be in Japan, not California, and it was owned by a private equity firm that was in London. But we still went to London and talked to them about it. You know, when I peel back the layers, I thought, is that really material? It was important to those teachers who were exposed to those strawberry fields. Yeah, I get it.

Is that really material to that company? And was that company actually even material to the private equity firm? Now you're getting back into a reach. We can't deal with every single social problem. And I mentioned time frame. As Harold said, we own — almost 70% of our US equity is passive; 50% — this is public equity — 50% of our non-US equity is passive. And I often tell CEOs, if we get the chance to meet with them, we're going to own their stock as long as there are public school teachers in California. We're going to own their stock longer than they're CEO of the company.

So, a cute story: We actually got to meet with Michael Eisner. He came in with one of his board members. This was obviously way back. It took him probably a good 20 minutes of the first meeting to figure out we weren't CalPERS, that we actually covered teachers. He then immediately told us, oh, I'm a friend of teachers. The headmaster at my kid's school is on my board. And we said, OK. Well, that's a private school. And we also have a problem with that. You claim that director is independent, yet he's the headmaster at your kid's school. And who's the largest contributor to that school, Michael?

So, we had to talk about him, and I used that line. I said, Michael, we're going to own your company longer than you're going to be CEO. And he actually sat back and really thought about that. He was kind of blown away by that. I had no idea at the time it was only going to be six months, so that was not us. It was other funds that complained about him. But it's true. Because we're passive and we hold the whole bloody market, we're going to own these companies for so long that we actually have a longer time frame than their CEOs.

And so, it really depends. If your typical holding period is six months or three years, I'd actually argue that's pretty short, to me. Our typical holding period is 10 years to 30 years. I'm actually looking at the problem that private equity is too short a duration for our portfolio. Real estate, it's awesome to follow Sam Zell, but — and Sam holds stuff for a long time — but most of the people in real estate flip stuff after seven years. That's not very long. You're taking a reinvestment risk.

But ESG really does depend on your time horizon, because these risks are business risks that are very long term in nature. They'll show up suddenly. We have a phrase that we use called *expected*

surprises. And I know that seems strange. How could it be a surprise yet it's expected? People hate when I use this analogy in California, but you guys will get it. We have earthquakes in California. We forget about them, but we have earthquakes. Whenever it happens, oh my gosh, what a surprise.

But we've known that L.A. and San Francisco are way due, way past due for their big earthquake, but it's an inevitable surprise. And so to us, it really does come down to a two-year time period. And then the other one is your level of materiality. We have struggled with that in the last year trying to define that with our board. It's just been crazy, because it really does get back to the eye of the beholder. You guys probably all own a home. And so what goes on in the next-door neighbor is really material to you. But if you look at the city or the state, is that really material? Probably not at all.

And I've run into people who are hedge funds. Their holding period is maybe a couple of weeks, maybe a year. They don't really care because they own it for characteristics. Quant people, I absolutely get it that most of the quant funds are not going to take ESG into consideration, because they're dealing mathematical formulas or trends, and it's hard to pull this stuff out of trend analysis. Absolutely. And then on the growth fund, not to pick on growth people, but I've had so many — I love the idea of GARP, growth at a reasonable price.

Most of the growth people that I've met, equity managers, it's growth at an unreasonable price. They just want momentum. They just want growth. They claim it's at a reasonable price today because it's going to go up, and so today's price looks reasonable. But a lot of the growth people don't really want to look at the long long-term issues. They're not as worried about risk because the opportunity is going to take it away.

But when you think about long-term investors — so I put ADIA, GIC, Texas Teachers, us. I've made good friends with Hiro Mizuno, who runs GPIF in Japan — \$1.4 trillion. They're thinking of merging some of the local governments into him, which would be another \$400 billion. I often say to him, Hiro, I'm an asset allocation shift to you. I'm 1/7 his size. But when you think about, so what's the level of materiality if you had \$1.4 trillion versus even us at \$200 billion versus whatever your portfolio is?

We have struggled with using the SEC version of a like-minded — I'll go back — a like-minded investor. Well, who's like-minded? When I think Texas Teachers — I used to talk to Britt Harris, he's moved on now. But when I think about Texas Teachers, I've teased them. They drink fracking fluid in Texas. So to him, fracking and oil and gas, that's their livelihood.

My buddy that runs Kentucky — so we're ex-tobacco; we're ex-firearms that are illegal in California; we still do invest in alcohol, but someday we won't, probably. I don't know. And my friend in Kentucky says, hey, everything in California is short. We're long on... They're long on gambling, tobacco, whiskey, firearms, and they make — they tax it, so that's how they pay for their state.

So, it really does depend on your perspective. And we've tried to define materiality by the size of the fund. We've used CVaR, now, as our latest measure. That became highly controversial because the teachers couldn't calculate CVaR, and they didn't like that level. Everything should be material. The strawberry field example should be material along with a major oil and gas issue. So materiality, I think, is still going to be our big struggle when it comes to ESG.

What are the types of ESG investing that are out there that I run into? Probably the most common and the most controversial is what I call exceptions-based, which is really divestment. And I have to raise my hand. We're involved in divestment. I don't recommend it to our board. I actually oppose it or going neutral, but they choose to do it. And I have said on the record — I don't mind saying it on the internet — we've done five divestments in our history. All five of them have lost money. Our losses right now are close to, compounded, over \$4 and 1/2, almost \$5 billion, which are huge. And it's getting the retired teachers to actually start thinking about it, because I would argue in virtually all five of them, we have not brought about social change.

So, I'm really trying to make the argument with people, and particularly the legislature, divestment doesn't equate social change. It's an investment decision. You exclude something from your investment universe because you have decided it's an outsize risk, and you don't want to include it. So, for our board, which is true, divestment is an investment decision. They have decided that through their analysis and our work there's enough risk, or it's de minimis, it doesn't matter, or there are alternative investments that we can do that would replace either those stocks, those bonds, or that industry. But that's probably the most common and certainly has drawn the most fight.

SPEAKER 6: Chris, what divestments were they and why did you pitch them?

CHRISTOPHER J. AILMAN: Well, and again, I didn't pitch them.

SPEAKER 6: No, I understand.

CHRISTOPHER J. AILMAN: But obviously, the first one was 87, was South Africa. And people say, hey, that brought about social change. It might have. There have also been books about how — I remember there was a sports boycott, a global sports boycott, that was very powerful. A global banking boycott. Many people have argued that by the time the US pension industry, and particularly the clergy funds, started finally getting around to it, it was very publicized in the USA but not a lot of other places. And then when apartheid ended, they were far too late in coming back in.

So, part of the challenge was somebody really going back academically and dissecting that. There's a lot of rhetoric and a lot of noise on it. The other one for us is, we've been out of tobacco since 2000. That's when the Engle case was big and the risk.... Obviously, that industry has not gone away, but the risk is still there. We've had to divest because of legislation. We've divested Sudan and Iran, so companies that do business in those countries — predominantly the Chinese oil

companies, some of the Malaysian equipment suppliers, Indonesian equipment suppliers, people like that.

We divested of firearms that are illegal in the state of California, which is specifically, in the US equity index, Smith & Wesson and Sturm, Ruger, because they make products that are illegal in California. And they're not allowed to sell them there. They sell other things. And then most recently, we divested of coal, US coal, and then non-US coal. Non-US coal had a big impact because of India. And China is trying to do a lot, but obviously, China relies on coal very heavily, so that was a very lengthy discussion and debate.

The biggest impact by far, tobacco. No question about it. We've revisited it a couple of times, and every time — in fact, CalPERS, I think, revisited it a year ago. And after looking at the data, came back with the decision. They didn't want to invest back in that area. And so there's a good example of eye of the beholder. Obviously, if you're in North Carolina, you're more than happy to own those stocks.

Tilting — and there's some really good papers. If you Google, does ESG add value? Obviously, I'm going to argue it does. You're going to see some very good papers on people who have done some demonstrations on tilting index portfolios, or tilting their strategy, either for low emissions, low carbon, ESG factors. They really distilled back and decomposed the returns and found that it really was driven by the specific companies. You could argue if you can attribute that alpha directly to ES and G, but it's very company specific. So, they believe because they screen for it that it added value. And there are quite a few papers out there on that.

I have seen funds that are what I call light green. They will still — they'll own the S&P 500, but they'll just underweight some of either the high emissions or the carbon owners. And then you're going to see what I think, sadly, we see a lot. When we survey our equity managers and our investment managers, 97% of them tell us they integrate ESG into their process. The three that don't, the 3% that don't, are mostly quant funds. But what we worry about is, are they're just checking the box?

They paid their dues, joined PRI, and they check the box that we do it. Do they really do it? And I got to tell you, I've actually made a mandatory class I taught for my staff on, how do we integrate ESG into the investment process at CalSTRS? And I could divide the room almost in half. And when I do lectures like this, I can — it is not always true, but I really end up seeing kind of a dichotomy of groups. And it's probably too harsh to say this, but I'm going to divide the room by everybody born before 1975 and everybody born after 1975.

It's a rude way of saying — kind of cutting Generation X in half, but basically the Baby Boom crowd versus everybody else. Millennials and Gen X absolutely get it, and they care about it. And my investment officers in that group want to talk about it and actually want to integrate it into

their investment process. They see value in it, and they think these things do matter. It's the Baby Boom, and maybe — and I'm part of that. So, maybe we're just getting old and grumpy, and we're like, I don't want to have to do something else. I don't want to have to learn something new. I already have my investment process. Don't make me integrate more. And it's not that cold and calculated, but it really is interesting about the pushback and seeing that split.

And I think that's what the CFA Institute has responded to, is they've talked to new CFA® candidates who say, hey, I want to have some curriculum and some discussion about ESG. I am seeing people where kind of everything in the world is relevant, people that want to change the world. And that's really hard, because I've had people argue with me, well, what is an ethical investment? What is a company that is long-term sustainable for the next hundred years? Is that Google or Alphabet? Is that Apple?

We love to glorify Apple, yet there's a whole bunch of rare earth minerals that are in this thing. And where those minerals are mined and how they're mined, I can tell you, it's ugly. But Millennials love it. They think it's really cool. So, how far can you go back before you're comfortable and piercing it? So there's lots of different structures. I think the best of class — and I've had this discussion with my staff. We don't care if a manager does fundamental analysis first and then at least factors in ESG, or does ESG first and then looks at fundamentals.

To us, it's got to be part of the process. When you do your financial analysis and ratios, you've got to look at the really long-term material business risks. This is one of the papers from the CFA Institute guide and the conclusions. So I will say, does ESG add value? Yes, because it gives you better-informed decisions. It's a deeper, more penetrating risk analysis, and I would encourage you to read this paper. Its conclusion I put up there, is that inclusion of this gives you a more complete analysis, a better-informed decision. What investor doesn't want to make a better-informed decision?

Can I define how much it adds? It's pretty tough. But I think, when you integrate it, you've got to move beyond a checkbox. You've got to define ESG. But first, you have to decide: what's your time period and what's material? Busy chart. I recognize that. We're going to show you a live demo of this. But there's a group in the United States that's already tried to help define, what's material? Along ES and G, and that's SASB — the Sustainability Accounting Standards Board. If you don't know it, look it up. It's got a very good board.

Yes, they are try.... the name is similar to FASB and GASB, and there's a reason for that. They are trying to push to have these adopted, because what they've done is gone by industry. Across this list, across the top is their industry's subsectors. And then they've created ES and G — environmental, social, human capital, business model innovation, leadership, and governance. And they've identified by industry sector, what's actually material and what's immaterial? So obviously, I don't really care much about the carbon emissions in the IT industry or the finance industry, but I care about their staffing.

I care about their workplace environment and their employees. But when I get into the resource sector, yeah, I do care about their emissions and about their oversight. One of the challenges with ESG — and we've hired Al Gore's firm. That joke I did at the beginning, I have to give it credit. I swiped that from Al Gore. And they've done very well. But what's fascinating to me is, they pay a lot attention to the E and the S when they buy companies. So they'll really worry about the environment. They'll worry about the social factors.

Most of their companies absolutely tend to have kind of lousy governance. And we're big governance fans. We love corporate governance. So, it's kind of like, well, why is that? Why are you ignoring that? Well, they're not ignoring it. But you know what happens? When they look at companies that are owned by, say, a family ownership — maybe not 50% control, but a former family-owned company — the founders tend to think intergenerational. And they tend to pay attention to environmental and social issues and operate better because they have their reputation on the line. Their family name is on the line. So, lousy governance structures because they probably have control or they control the board, but they focus in on these long-term factors.

So, here's a bunch of research. I think you've got to review the MD&A, but I'm part of the group with some other investors that are really trying to push management to get out of the boilerplate and make that worthwhile. We're also trying to get companies in the USA to actually start disclosing along the lines of the SASB data. We're not going to wait on the SEC. That's a lost cause. But you've got to really look at the long-term stuff.

So, if you could bring up the materiality map. And so you can actually go to this on the web. You can click on different sectors. And as you notice as she's scrolling across, you can see the risk. And then it opened up that entire sector and showed you all the different parts of that that you can interact with and get data on. And you can identify, OK, if I'm investing in this area, they've already figured out, here are the extra risks you need to be paying attention to. Here are the factors that you want to consider. And they've done that in consultation with the industry and with companies. There are thousands of companies, or hundreds of companies that gave input into this model.

And then scroll down over here onto the other side. You can see that in some industries, you're not going to get a lot of data. But then other ones, you are going to find information that is very material. So, they've got the major industries, and then they break them out into subsectors. It's online. It's available. And you've got access to it. And I would encourage you to at least start incorporating that into your investment decision process. You want to be able to go to your investors and your clients and say, we're thinking about all kinds of things. Besides just the financial ratios, we're looking at these added risks.

Now, I'll be honest. Is all that data there? No. You can go to a company, and you can pull up two companies side by side. One's going to present it on metric tons, somebody else going to be doing it on per square foot. One person is going to be doing it on quarterly, somebody else is going to

be only doing it annually. So, as an analyst, it is really hard to compare this stuff. It just drives me batty. That's where SASB's going to bat for you and trying to get companies to standardize their reporting.

But if you go to — and I'll pick on Bloomberg since you're right here in the front. If you go on Bloomberg, type up any company, put in a stock symbol, and then type the letters ESG — I guarantee you, if you haven't done it, you'll be blown away by the volumes and pages of data that they've got already loaded up in there. A lot of the fields are blank. And a lot of them are hard to get to because they can't extract it from a company, but you can already see trend analysis of, how has a company done over time? You can start to see comparisons of that company to other companies in the industry. And I think that's where you can get into really good data and start looking at those trends and where things are.

So, the other thing you can do is do ESG Help. Now, I know it's a Bloomberg ad, but I think they've got a lot of good data that's within it. SASB, in the SASB Materiality Map. The PRI has got some good data and is putting out research. And then obviously, the CFA Institute is constantly putting out research. So, I wanted to open it up to your questions and also online if we have questions, Ron. And in the back.

SPEAKER 7: Chris, may I ask you a challenging question?

CHRISTOPHER J. AILMAN: Please. That's all I want. No softball.

SPEAKER 7: If you tell the CEO, we're going to own your stock no matter what, for longer than you're here, and you tell your board, I don't want to do disinvestments because it's not that [INAUDIBLE], how do you influence these guys? They know you're going to lose stock no matter what. You can't threaten them to take it away. You can't threaten them not to invest. What's your lever to get management that do the things that you like them to do —

SPEAKER 9: Oh thanks.

SPEAKER 10: You're welcome.

CHRISTOPHER J. AILMAN: Let me summarize your question for the internet audience. I would say TV audience. If we own the company forever, how do we get CEOs to actually care that they should do better than us? Right now, it's really hard to get them to even wrap their heads around owning the company forever. They are so used to, I'm going to say, the business roundtable and the chamber of commerce. Teach them the mantra, if you've got an angry shareholder, just tell him to sell and go away. And they are really used to that typical equity analysts coming in and saying, well, if you're not going to do that, then I'm not going to own your stock.

So, I hear what you're saying, but we're on the back side of that argument, where we just can't even convince them we're actually going to own it, that we do care long term. We think they're highly motivated because we also know they care about their stock options and their vesting, and we're active with their corporate governance. So, we don't hire and fire management, but we hire and fire the board. That's where we're trying to get that message across to that board, which is, we care about really long term.

Think about employees. You guys work for probably — if you work for a public company, you might be devoting your entire career to that company. You're sometimes more vested than some of the management of how well we do. So they don't understand passive investing. They don't understand the index. But they understand growing in the index. And if they were — look at the top 50 of the Russell 3000 20 years ago, and look at it today. And they understand that, to them, that's money in their pocket. So I think that's how we get them motivated and keep them focused. Yes sir.

SPEAKER 11: When you say that ESG matters, that you care about it and then different generations care about it, and all that.... When you say it matters, do you mean it matters, ESG matters for itself because ESG is important in life? Or do you mean that it matters insofar as it helps the bottom line?

CHRISTOPHER J. AILMAN: So the question was, do we believe that ESG matters because it's sort of good and wholesome or we believe it matters because it adds to the bottom line? I firmly believe it adds to the bottom line. I'm starting from that risk perspective, that I think a company and a corporate management that pays attention to ESG risks and thinks longer term will operate better and achieve higher returns than a company that cuts corners in the shorter term. It is really hard to show that. We've been challenged for years of, OK, explain how good governance is different than bad governance when some of the bad governed companies make really high returns, especially short term.

And our point is, well, but that's the problem. It's short term. Think about life. I can't imagine there's many things where you've cut corners and haven't paid the price later. So to us, it's kind of those things that this is a smart way to do business to reduce your risks and focus in on those risks. Chipotle brags about the fact that they locally source all their food, which is really cool. But now we're realizing, oh, rats. There's a problem with that, is that they don't have consistent food standards. So, I think there's that challenge. Life, it's not black and white, but this isn't about doing good. This is about actually operating better and trying to operate for the long term. Hard answer. I want to — I'll go over here, then come over here. Yes sir.

SPEAKER 12: So, if you take on the governance side, if you look at the SASB website, it doesn't look like they've given the board governance too much. So if you take two simple examples — Samsung, which scores incredibly poor on corporate governance because their holdings and their board makeup, or a company like Snap, which is IPO'd in the voting structure — how would you,

if you're an investor — and you're probably an investor in both — how do you try to move the dial and have an impact, if at all?

CHRISTOPHER J. AILMAN: So the question was, comparing Snap and Samsung, how do we move the dial or move the needle when it comes to governance? Corporate governance, to me, is kind of both an air war and a ground war. When we can work with institutional investors — in fact, we're meeting the giant Japanese pension plan. There's a group of global investors that get together to talk about issues around the world. When we team up with other associations — Council of Institutional Investors, Asian Corporate Governance Network, ICGN/International Corporate Governance Network — we're trying to move the needle at the high level, at the regulator level.

Obviously, the SEC is kind of gone for now. But then it becomes down to a company-by-company kind of ground war, and we pick our spots. So our big issue has been diversity on the board and executive compensation. We've been focused in all the way down to methane emissions within the electrical utility industry. We can't tackle everything, but we try and tackle big ones. We put out a press release when Facebook came public and said, shame on you, 60% of your membership, or your viewers — people on Facebook — are women, yet you don't have a woman on the board. They put Sheryl Sandberg on the board. Now they finally put another. OK, great. Two. We'll take our shots where we can, but I have to tell you, we've been at it for 25 years. It's darn hard to get better.

I'll pick on a good company like Disney. We got rid of Eisner. Governance got really good. I'd say their executive comp was right on. Now they love the CEO, and executive comp's going right back to where it was back with Eisner. And we've screamed foul, but nobody cares because the stocks was going up before ESPN fell apart. So hard answer, but that's the one positive. We're in it for the long term, and our staff's devoted to the long term.

WALTER: How do you balance some performance — let's say a sector has great performance but it has ethical issues, whether smoking or firearms or whatever, but you also have a responsibility to your constituents. How do you balance that type of thing and saying, are we really influencing by investing in that? Are we doing the right thing by giving you high performance?

CHRISTOPHER J. AILMAN: So Walter asked a question I have to unfortunately dream about every night, practically, which is, how do you balance investing in industries and sectors that particularly our clientele, our members might object to or find offensive in some way? And the list gets long. Obviously, you talk about alcohol. You talk about opioid addiction. I've even heard — I don't see any plastic water bottles, but I've even heard now that one of the controversies of plastic water bottles, high fructose corn syrup.

You brought up our fiduciary duty to our members. Our primary duty is to properly fund a massive retirement account. And Harold pointed out, we are underfunded, but we're not as bad as

Illinois, I will say. Thank goodness. So, the absolute primary duty is to fund that, diversify the assets, and do it at the lowest cost possible. And so, we need to make that growth and that return.

They own units of a trust fund. This is a trust fund. It's not individual investment accounts. And so one of the challenges I constantly try and talk to teachers about, and I do a fair amount of speeches with them, is that it's an intergenerational trust account. So, while this generation may care about one thing or the past generation cared about something, it's got to be for — we're over a hundred years old. We're 110 years old. So it's got to be for a really long time period, and you got to balance that.

So, because we're passive and recognize that as an acceptable investment strategy, we're going to own the entire market. We just simply own the market. Does that mean we own lousy companies and good companies? Yes. Does that mean we own Enron? Yes. But then, in the last year, we owned Apple and Facebook and Alphabet and a bunch of others. So, we're going to own the entire market.

And oh, by the way, I can do that and manage it in-house. We run over \$100 billion in-house in Wells Sacramento with an awesome staff at a fraction of a basis point, a hundredths of a basis point. And I can move money in and out of that market in billion-dollar slices without creating an influence. You guys don't even know when we come in and out of the market in that kind of size. So, we're not creating a wake.

I think there's a lot of efficiencies in doing that versus trying to do active management, of trying to say, what industry or sector? If it's illegal and outlawed, I'd say thank you, because that's really helpful. But if it's legal, I don't know how we do that. So, you raised a good question. And the hard thing is, people ask me a lot, like you said, with the \$200 billion, how do I sleep at night? I sleep like a baby. I wake up every two hours and scream. Yes sir.

SPEAKER 14: Thank you for sharing. I'm from Malaysia. You — started the small, little boutique company specializing ESG two years ago, and assets have grown from zero to north of \$1 billion US dollars in two years. It was with a plan, and the plan was simply this, that we thought this was — and you asked in the beginning what we thought ESG was. In the world, it is sustainable investment in the longer term.

We thought that this was necessary. It helped to get FTSE the index provider, to do FTSE4Good in Malaysia. And then they also did the FTSE4Good for ASEAN, which was five countries in southeast Asia. I just wanted to say that our style is long duration. We're not absolute return, but we certainly are active, and we are bottom up. It doesn't stop us from applying metrics and things like that, but if we don't like the company long term, we won't invest.

So, the universe is created by the index, but we don't have to underweight. We don't like it, we don't invest. So, that's our philosophy. Now you say to me, how is it possible to talk about governance in their part of the world? And I say it with difficulty —

CHRISTOPHER J. AILMAN: Yeah.

SPEAKER 14: — because you have to engage the companies' right to the ports, talk to the CEO, talk — not talk to the investment — not talk to the investor relations person. Over time, they realize one thing. Because we are long, and we supply liquidity at a time when they don't have liquidity, that's something worthwhile to talk to them about. And they will listen. Surprisingly, small companies listen better than big companies. Yeah.

CHRISTOPHER J. AILMAN: Interesting.

SPEAKER 14: There's a company in Indonesia that has a proper family charter, that has a family office. Tell me how many exist in that part of the world? Not too many. How many exist in the US? Not too many. But people like that, once you engage them and you talk to them, then they become more, not only user-friendly, but they also do things to the stakeholders and the shareholders which makes you [INAUDIBLE]. But it takes time.

CHRISTOPHER J. AILMAN: Yep.

SPEAKER 14: Now my question to you is this. This is not one term for everybody. The Swedes have a different view. You have a different view. The Germans have a different view. The Dutch have a different view.

CHRISTOPHER J. AILMAN: Right.

SPEAKER 14: Take something like environmental. We've got a big palm oil producer.

CHRISTOPHER J. AILMAN: Right. Yep.

SPEAKER 14: So Europe, you walk right into that issue of, is this likelihood for a lot of people?

CHRISTOPHER J. AILMAN: Right.

SPEAKER 14: Unfortunately, they see contamination of water supply as a whole lot more important than fog in the air. So, one has to engage the likes of the WWFs of the world and talk to them about metrics. How do you do that in the US context?

CHRISTOPHER J. AILMAN: So, the question was, particularly like in Asia, like palm oil in Malaysia. As you described, your company's made a living running money by ESG. How do you deal with the local issue of palm oil and the deforestation, but then also employment and water? This is life, man. This stuff is not black and white. This is not simple. It is all really hard.

You guys know the disruptions happening due to the technology revolution. How do you say to somebody, this is better, but you're going to lose your job? Polluting the atmosphere is not good for the planet, but too bad, you're going to lose your job. Or you're not going to have adequate water. We're trying to engage — and that's where we get into the fact that, particularly with the PRI and some of them, there are so many issues, so many problems to solve. And my point is, you can't solve them all. You've got to start at the level that it's material, and then we'll start getting down into issues.

But palm oil is a serious issue. We've had staff go and visit, get educated, the tar sands up in Canada. Go up and visit Alberta and walk around for a while and just smear your finger across an outdoor table. It's bizarre. We can't solve all those, but we can team up with people who study them and then can engage companies. And you think about it, those companies realize, OK, we're doing this now. We can do this for a couple — it kind of feeds into your question that came in the back about as a passive investor.

There's so much money in the USA. There's so much money in the USA that's now passive with the mutual funds and with Vanguard and the index funds, but that's not reaching the CEOs. What they're hearing is from the analysts, where are next quarter's earnings? What's going to happen in the next 91 days? And we've got to break that cycle and get them to say, OK, what you're doing made money this quarter — it might even make money for the next two years — but you're not going to be able to do this for 5 or 10 years.

Or another ESG risk is, what if the government absolutely just regulates you out of your business and says, you know what? You can't strip mine, or you can't do this or that. You'll lose your social license to operate as a company. That's a serious risk I'd want to know about, especially if I'm exposed on the credit side, by gosh. I want to know. So to us, we're trying to get them to think about those long-term fundamental business risks. Try to take it away from the debate about climate change or when is it going to change? And get away from the politics to just, what's a material business risk? What's going to keep your company operating in the next 10 years versus be a threat to your company? We've got time for one or two more questions. Is this one online?

SPEAKER 15: Yeah. We got —

CHRISTOPHER J. AILMAN: Oh boy.

SPEAKER 15: — questions here. The first one is, have you guys performed any attribution analysis to assess the efficacy system of your implementation of ESG?

CHRISTOPHER J. AILMAN: So, his question was, have we done any attribution analysis to explain the efficacy of ESG investing? Ad nauseam is the word I would use, that we've tried to decompose the returns. And you know what? By golly, it's nearly impossible. So, that's one of the

hard things about this. We can identify very easily examples of disasters, like I already gave you Deepwater Horizon and different things that were like, yeah.

We lost money in that circumstance. Enron. But it's really hard to decompose and pinpoint to say governance drove that return, or that company was better at managing its environmental risk or paid attention to social risk. If I gave you two companies and said, oh, one has horrible labor relations and massive labor problems and constant strikes. The other has really good labor relations. And they — let's say they deal with the hospitality industry, so you care. You'd be like, well, I don't really want the one that's creating conflict.

But can you attribute their return to that? I don't know. It's hard. So, I don't have a good answer, and I can't say yes or no. And I think that's what makes ESG so hotly debated in the USA and in other places, is the fact that we can't pinpoint it and say it's worth 52 basis points.

SPEAKER 15: I think that might lead into this next question, which is, we've seen major pension consultants, such as the Western Division of NEPC, recommend that no ESG information is material. By what process might they become more educated?

CHRISTOPHER J. AILMAN: So the Western Division — I actually don't know that firm well. I know some of the founders. They're saying no ESG information is material. I would vehemently argue against that. I would encourage them to read the information from SASB, because back to that question of, what's the level of material? Is it 1 product out of a company that makes a 100 products? No. But what if that is 50% of their revenue stream? I think that consultant would argue, yeah, OK, that's pretty material.

And I think that's where the wording at the beginning, the words matter. And boy, they're getting the darn discussion confused, and they're blurring it instead of just getting down to the facts. If we said to that consultant, would you consider long-term business risk, operating business risk, material or important? I would think they would say yes. So, get it away from the semantics. But interesting discussion. I don't know that firm.

HAROLD BRADLEY: Chris?

CHRISTOPHER J. AILMAN: Yes sir.

HAROLD BRADLEY: So, I was the only one who put my hand up in this room saying that I was dubious about ESG. And many of the reasons are the very reasons you've stated in your commentary, which, to me, at the end, basically, you said it's in the agriculture, and it becomes very difficult to do. But I'd like to ask you about the check the box, which you had up there. In my experience as an institutional investor and asset allocator who hires active managers and others, they all go run off

and get registered so they can check the box and then be on the approved-to-buy list for whatever state pension fund or endowment or college endowment or whoever might use it.

So I guess I'd like you to talk a little bit about, how do we manage folks? Minority-owned firms, I went through that where, check the box. Minority-owned firms. OK, well there's a woman who's the CEO — Great. I'll deal with her — who was hired by a major national Wall Street firm to be the front person and qualified. How do you weave through the regulatory arbitrage that people will do as soon as you start trying to put ESG as a label on it?

CHRISTOPHER J. AILMAN: Our board — so the question is specifically, how do you pierce through the check-the-box, that we're ESG and we consider it. Our boards put that challenge in front of us, and we've had to go manager by manager. And we visit them and really say, show me what this means or how you integrate it. I've been highly critical of people who say, well, Rob here is our ESG manager but none of the rest of the analysts are. And oh, by the way, Rob's in an office down the street on the corner. And I'm like, OK, well, then he's not involved in the process.

But I met a firm that said, no, we have two people. But I was able to confirm, they're in every investment committee meeting. And the PMs offline told us, yeah, we actually talk to them all the time because they specialize in it. And I thought, OK, so I won't be as critical. But it really is trying to see — and it's all over the map. I can go visit an old line, really old money manager for us, in London. Fundamental traditional. Won't use the words ES and G. But everything they do is back to that deep value, and they look at it.

There's another firm that will turn to MSCI or to the FTSE4Good and screen their portfolio that way. At least they're integrating it. I think the MSCI and the FTSE4Good stuff is too simplistic. Is it almost like a stoplight, yellow/green/red, or one, two, and three? Doesn't break out that clean, but at least they're integrating it. Versus somebody who then is kind of fumbling and sort of saying, well, once we vote at the committee, then we say, Bob, can you look at — or Sally, can you look at the ESG considerations? We can kind of see through it.

But I realize this entire industry has only been here and coming online for less than 10 years. PRI's 10 years old last year. It's only been, I think, two years since it's been in the CFA Program curriculum, so this is an evolving area. And I think we're going to get people who are going to have patience with people.

SPEAKER 16: PRI's —

SPEAKER 17: Sorry.

SPEAKER 16: No, you're —

SPEAKER 17: Go ahead.

SPEAKER 18: I noticed with prohibition on Smith & Wesson and Ruger, I noticed it was very carefully worded that they sell products that are illegal in California. It's not that they sell them in California, because I think they withdrew.

CHRISTOPHER J. AILMAN: Yeah. They sell similar products with other features.

SPEAKER 18: Exactly. So that seems to have nothing to do with business risk, but just what California politicians decided to write in the law. Is that same logic applied to all other industries?

CHRISTOPHER J. AILMAN: So, the question was specifically on our gun divestment, since it's very narrowly worded. Does that lead into all other industries? And that's where I think you get back the different ways you do ESG. One of them is exclusionary. And as I said, I have a problem with the, from an investment professional standpoint, from just excluding broad industries, because to me, it's not black and white. It's really difficult. But as a fiduciary board, the board has that right to take it out of the index and to say to the active managers, you can't consider these companies.

Because in those cases, they're absolutely de minimis to our portfolio. They're such tiny, little companies. And we had alternative investments that were equal or even better at the same risk and return. So they can then say, OK, we're going to exclude those because we're going to go over here. But I think that's where exclusion investing is really tough. And it draws a lot of the anguish because, obviously, today — I know I'm out of time.

One of the biggest pressures we get is Fossil Free and 350.org. Our meetings are public. They're broadcast on the internet — anybody that's just really bored and wants to watch us. And we get public speakers from 350.org and Fossil Free California at almost every meeting. But divesting of the entire oil and gas industry now — we get the issue about stranded assets. So, if you haven't looked at that, Google it and understand the concept of stranded assets.

Maybe I buy into that and say yes, but when? Is that 20 years from now, or is it 10 years from now? First, give me a price on carbon, then I'll start worrying about stranded assets. So, I hear you. It's tough. But I think that's why we'd actually rather get into the analysis than just exclusions. And it becomes more judgment based.

SPEAKER 19: We can do two more questions.

CHRISTOPHER J. AILMAN: Two more questions. Yes ma'am.

SPEAKER 20: You were saying 10 years ago this ESG and [INAUDIBLE] came on board, but I worked for Calvert back in 99 —

CHRISTOPHER J. AILMAN: Thank you.

SPEAKER 20: — which was — it was more — though it was going uphill, facing a lot of headwind, it was definitely existing way before 10 years ago. And DOL had also written a letter prior to 98–99 giving ESG, socially responsible investing, a green mind. I just find it interesting.

CHRISTOPHER J. AILMAN: I absolutely, gladly stand corrected. You are 100% correct, as Calvert has been around for a long, long time, and DOL well added this. So the question was that I said it's been around 10 years. Calvert's been a business taking — and back then, we called it socially conscious investments, or socially screened investments.

SPEAKER 20: And it included, again, environmental, social, and corporate governance.

CHRISTOPHER J. AILMAN: Yep. It had ESG, we just didn't label it. I'm almost sorry we started labeling it. But socially conscious, that had its own lingo, too, because it gets into different things. But you're right. No, this has been around. I guess I'm just saying that in terms of going mainstream, and maybe that's not even a fair way. But being in the CFA Program curriculum, I recognize that for a vast majority of financial analysts, this is fairly new of factoring this in. Beyond the financial analysis, you now need to start thinking about these things. So thank you for correcting me. I actually appreciate that very much. One more question. I'm going to take a new one. Sorry. Douglas?

SPEAKER 21: Do you have any immediate examples of redemption, a company that had a fair amount of — or was under scrutiny, if you will, and then, whether it be an epiphany or the marketplace, anything less, they completely reversed course? And maybe a bullet point or two on how you measure redemption.

CHRISTOPHER J. AILMAN: Yeah. So the question was, do we have any examples of redemption and how do we measure it specifically? I guess I would not say in terms of the biblical sense of redemption and forgiveness. It's been more degrees of change. Nobody has just turned the corner and recognized, methane's bad. We'll stop emitting it. But we have asked companies to start measuring that, and then they've started paying attention to it. Because what gets measured, gets managed.

Probably our best examples has been with companies of, we're saying, look, your board's not diverse. I like to pick on Avon all the time. I have three grown daughters, so a houseful of women. It was not lost on me that I knew nothing about cosmetics, yet the Avon board for decades — CEO was a woman, but the entire board was white male. Male, pale, and stale, just like me. And I thought, OK, that's nuts. Did that turn the company around? It did for a while, but it's still been challenged.

And I think we've got examples — we've experienced examples of companies that suddenly started paying attention to capital allocation, of boards that were more attuned to, how are they taking — they're getting revenues in. How are they spending it? R&D versus buybacks versus longer-term

types of things. So, I can't give you a black-and-white off the top of my head where somebody — the stock price turned around on a dime, but I think in some of the places where we've gotten active as a shareholder and brought it to their attention, management has made changes.

And I think the companies have performed better relative to their peer group, because we're really specific. It's not just whether the stock did well, but did it do relative to its peers, it didn't make changes?

HAROLD BRADLEY: Chris, that was a really interesting question, so I'm going to follow it up with this one. You talked about South Africa as a divestment for you, and that it was maybe later because things had already happened. So, I'm going to bring up two things that could be related to ESG. One would be Elon Musk and Tesla, which now has an infinite valuation. And when you burn so much cash on your car that you buy a solar company, you've now scored two points there.

The other one would be Uber. As I got in a car yesterday at the airport, the driver tells me that all of them have switched over to Lyft because they were so worried customers were going to quit driving on Uber cars because of a sexual harassment case by executives at the company. Is Twitter, Facebook, and other social media, has it basically obviated the need for ESG kinds of evaluations?

CHRISTOPHER J. AILMAN: I would say absolutely not. I think it's made consumers more attentive. There are companies out there that — there's a bank in California that if you use your credit card, and it's obviously a mobile payment system, it will instantly tell you the ESG score of that company you bought it from, and then therefore make you a better consumer. Will that stop you from buying from it? I don't know. And I think in your examples, I've said to people that just love Elon Musk and they love Tesla, that's back to that sustainable.

I'm not a scientist. I've tried to understand lithium batteries. But I know all the junk that goes into the battery isn't exactly all that environmentally wonderful. And I'm kind of wondering, what's going to happen in 20 and 30 or 40 years with all these cars and all these batteries? Are we're going to have another toxic waste problem? And then suddenly realize that, OK, well, yeah, that solved one problem, but it made another one. So, that's the problem with trying to predict the future — you guys know that — and understanding what really is sustainable. And I can tell you, what's darling today, you really got to pierce through the cover and try and look at and understand, OK, what are the long-term implications to all of this?

HAROLD BRADLEY: So Chris, thank you for being here. He's got —

CHRISTOPHER J. AILMAN: Thank you guys.

HAROLD BRADLEY: — to run off to head a meeting in Canada tomorrow —

CHRISTOPHER J. AILMAN: Toronto.

HAROLD BRADLEY: — right?

CHRISTOPHER J. AILMAN: Yep, with a bunch of CIOs.

HAROLD BRADLEY: And I want to thank the audience for joining this session. You may access this recording online after the conference, and other sessions at the conference are going to be available as webcast. They're not — You were worried about following Sam Zell. I think you did — I was a lot more entertained. I'm sorry, just —

CHRISTOPHER J. AILMAN: Good. I gave you \$5, that's why.

HAROLD BRADLEY: If you go off to cfainstitute.org, that's where you'll find these recordings of these sessions. And the thing that I'd also like to say to the audience, it's really fun to watch it over the internet, but I'd say when you're in the room with a lot of really smart people who are CFA charterholders and care about the principles that are involved in CFA Institute, and you get guys like Chris here, who obviously cares about it — I've run into him at a couple of CFA Institute conferences in the past. Be here next year and join us. So, thanks very much.

CHRISTOPHER J. AILMAN: Thank you.