BNY Mellon
Perspectives

MARK CARNEY: FINDING VALUE IN VALUES

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Featuring:

Mark Carney, Governor, Bank of England (2013 – 2020)

Hanneke Smits, Chief Executive Officer, BNY Mellon Investment Management

Moderated by Tom Hoare, Deputy Chief Communications Officer, BNY Mellon

TOM HOARE: Hi everyone, it's Tom Hoare. Thanks for joining us for another episode of our BNY Mellon Perspectives podcast series.

We've got a great one for you today. We recently hosted our inaugural Future First Forum, where we brought together industry experts and our own leaders here at the firm to talk about one of the most important topics of our time, and that's how financial companies, and really every industry, are working together to address environmental, social and governance considerations, also known as ESG. We've seen a lot of activity in this space in the last two years especially, as the impacts of climate change, a global pandemic and unprecedented issues around racial injustice have come to the forefront. But it's been a long-time priority for us at BNY Mellon. Being in business for more than 200 years has taught us a lot about sustainability, and we viewed it as a great privilege and responsibility to be a convener on this topic at our Future First Forum.

And our keynote speaker at the forum was Mark Carney. Mark was the former governor of the Bank of England and currently the United Nations Special Envoy on Climate Action and Finance. He's an incredible leader. For the conversation, he is joined by our very own Hanneke Smits, our Chief Executive Officer of BNY Mellon Investment Management.

And there's so much in their conversation that you won't want to miss. Mark talks about how an ongoing series of crises, from the financial crisis in 2008 all the way through the COVID-19 crisis today, has really caused him to reassess how he measures value – and how society and the financial industry need to do the same. That might mean giving investors an incentive to support companies that might be carbon-heavy today, so that they can take the measures needed to reduce emissions and their carbon footprint, tomorrow and beyond. It might mean governments taking an approach to climate policy that creates more transparency and predictability for companies and investors. And overall, it means moving away from the notion that there has to be a trade-off between planet and profit, or between the short and the long term. Because as we know, both matter in the context of ESG.

So I really hope you enjoy the discussion. And as always, share your feedback. Listen, rate, review; tell us whatever you think wherever you listen to your podcasts. We'll see you at the next episode, and please enjoy this conversation between Mark Carney and Hanneke Smits from BNY Mellon's Future First Forum. Thanks again.

HANNEKE SMITS: Welcome. And thank you for joining us today for a conversation with my esteemed guest Mark Carney. My name is Hanneke Smits, and I'm CEO of BNY Mellon Investment Management.

I'd now like to welcome and introduce our speaker today. A world-renowned economist, Mark served as governor of the Bank of England as well as governor of the Bank of Canada. I've had the honor and pleasure to work with Mark quite briefly during his final year at the Bank of England on which board, or court as it's known, I served as a non-executive director.

He's currently the United Nations Special Envoy for Climate Action and Finance and finance advisor for COP26 to the British Prime Minister. Most recently, he released the widely acclaimed book titled *Values: Building a Better World for All*, which looks at the challenges of today's market society and specifies how societies need to reframe their values and reform markets accordingly.

With that, Mark, thanks for joining us here today. And I just want to start with the book. What led you to writing it? Can you please talk to us about the thinking behind the title, *Values*?

MARK CARNEY: First, Hanneke, thank you for having me. It's lovely to see you again. Yes, we did work together for all too brief a period, but you've gone on to bigger and better things. And I wrote a book. Why did I write a book? In part, it was through my experience as a governor both in Canada and the U.K. In the end, I was a governor during a period of crisis. I started really at the start of the global financial crisis.

I started in February of 2008. Bear Stearns failed within two weeks of that. And my last day at the bank was the Ides of March of last year. And the last act at the bank was on Sunday evening, an emergency swap line with the Federal Reserve as part of the COVID emergency response.

I wanted to use the opportunity of stepping back from leadership or policy leadership to reflect on what were some of the common drivers of this situations. Why did we have the various crises? Was there a common attribute to that? And was there something to take from the response that we had to the credit crisis, to the COVID crisis, and to the ongoing climate crisis that could help accomplish the second part of the title, which is building a better world for all?

And my thinking sort of centered in the end on this relationship between value in the market – how we price things, how we value things, and what can be valued in the market – and what should be kept aside. And our values as individuals, our values as a society. And the essence of the title is to have a bracket or a parenthesis around the S, because that relationship can run in both directions.

Take one extreme, which is the run-up to the financial crisis of 2008. The values of the market became paramount. We had a period of what one can term market fundamentalism, where the answer to problems in markets tended to be to build more markets and to deregulate. That's how we ended up with a world of CDO-squared derivatives underlying cash instruments. And that undercut the essence of the market, the social capital market, and led to some of the challenges that we had.

To flip it around more positively, and I'll finish with this: What we're seeing in the COVID crisis are the values of society coming to the fore – individuals, the way they behaved, with solidarity, and responsibility, fairness, a sense of fairness. And also potentially, and I hope actually, with our response to the climate crisis, where we're moving from a situation where it was a trade-off between the short and the long term, between planet and profit, to a hierarchy of values. A value of sustainability.

And in that case, the value of the market. We can harness the power of the market to help achieve the values of society. It tries to span all of that and ground it not just in economic theory, but in the experience of the crisis that we've all been living through.

HANNEKE SMITS: So, I think what I'm hearing is sort of two things. One is that you believe that the financial services sector in particular did learn some lessons that allowed it to actually step up to the challenges of the global COVID pandemic.

And secondly, I think in your book you also reference that the COVID crisis resulted in creating what I think you frame as a policy framework for the common good. And that if there are some lessons that can be applied from that, it's really to solve the biggest challenge that we're facing which is intergenerational, which you just referenced, of climate change.

Can you just elaborate a bit more? What do you mean by the policy framework for the common good? And how can we apply it to the climate change crisis?

MARK CARNEY: One of the points made is not original to me, but a point I try to pick up on in the book, is a question of perspective. And from the perspective of the common good, it's not a utilitarian concept. In other words, it's not on average improvements. But it's really looking at the good of all in society. And a point of perspective is arguably we see most clearly when we see from the perspective of those who are most vulnerable in society. Perspective on the economy is very different if you're unemployed, or a perspective on the security services are different if you're subject to some form of discrimination or to health care if you don't have access to health care.

Taking in all of those perspectives, and to say parenthetically, one of the things that we did try to do at the Bank of England was go out and talk to underrepresented groups, the more difficult economic parts of the country, to understand really the totality of how the economy was doing and the impact of all of our policies.

To go to the heart of your question: One of the things that I think we did see with through the COVID crisis is a recognition that we were all in the same storm but not necessarily all in the same boat. The risk that some of us have been subject to, the risk that I'm subject to – to personalize, it is much less in this room, working effectively through a computer, than it is obviously for a frontline worker or somebody who delivers my packages.

And the incidence of disease and hardship through the COVID crisis has fallen on those groups disproportionately. And that unfortunately maps to those who are in general more disadvantaged in society. That sense of perspective, that recognition of some of the inequalities, the structural inequalities in society have helped form some of the desire for the response as we come out of COVID. And to try to bring us up together, that's one. And we can come back to that if we wish.

The perspective, though, for climate of those most vulnerable is partly those in countries that have the biggest impact of climate change today. For example, the African continent does the least to contribute to climate change in terms of emissions, but it is the most affected by it. Seven of the most affected countries are African today from extreme weather events.

But the real perspective is the perspective of those who will come after us. Those who are young today who will bear the brunt of climate change. Not just the physical effects, but also the economic effects if we don't address it. And it's having that sense of solidarity, that sense of perspective that then brings the opportunity to bring the future into the present. And take action today to reduce those risks, those impacts in the future. Because it's much, much less expensive, much less costly to act today to address these challenges of the future. And in fact, to bring it back to that relationship between values and value — if it's clear that that's where society wants to go, and I would argue that it increasingly is, we have people that want us to address climate change. One hundred and thirty countries have now set net zero as their clear objective. Then we can organize ourselves and create value in the market in order to achieve that. And when I say the market, I just don't mean financial markets. But I mean within companies and for workers and others. And that process again, I do think that process is underway. And our challenge is to see it all the way through.

HANNEKE SMITS: Partly, like you're saying it's also a function of a perspective of time horizon, right? And the analogy with COVID is also there because it's being observed by many that the cost of COVID will actually also be borne by the younger generation. I'm already seeing that as well by sort of the impact it's having on education, on getting into the workforce, and getting jobs. And so on and so forth.

What you're saying is that it's important to show solidarity with the generation. Not just in COVID, but also from the perspective of climate change. And there are some real actions we can take now. Perhaps turning to what countries are doing with the political landscape having changed quite considerably in the U.S. and Europe recently. Thinking about Brexit, as well as the recently appointed Biden administration, how do you actually then see climate policy playing out over the next couple of years?

We've also seen the recent U.S.-China pledge, for example, leading to some rising optimism for COP26 which is taking place later in 2021. And for which you're financial advisor to the U.K. government. So, putting some of these different actions and events together, can you elaborate on the importance of the Biden's administration's actions to U.S.-China pledge. And actually, in a way the role of international diplomacy.

MARK CARNEY: It's a hugely important set of issues. And the first thing to say is that it's incredibly significant. The actions of both China and the United States in the last six months are incredibly significant. I stand by what we were talking about earlier, which is, we've had this broad movement towards sustainability in our societies. It's manifest in European policy, U.K. policy, Canadian policy, policies in a variety of countries.

But it's critical that the largest economies, the largest emitters, are full participants in this and really are leading it. And so President Xi's commitment to net zero by 2060 for carbon in China that he made at the General Assembly of the UN in September was a landmark moment: first major emerging economy to do anything like that.

Of course, the engagement of the Biden Administration. You rightly referenced, Hanneke, that recent agreement brokered by Secretary Kerry between the U.S. and China on climate. The Biden Climate Summit was very important as well.

What can we expect? And I think first and foremost, the U.S. coming back into the Paris Agreement, which has happened. The U.S. setting out clearly its objectives: the percentage by which it will reduce greenhouse gas emissions by 2030, a near-term target in climate terms. Incredibly important in and of itself in terms of the impact on the environment. But also, I think, throws down the gauntlet in a constructive way to other advanced economies to do more.

We've seen that with the U.K. already in advance with the U.K.'s pledge down 78 percent by 2035. We've seen in the EU. We'll see it from other advanced economies. And it's that dynamic we need for success in Glasgow this November, which is to have those economies that have had the largest historic emissions, have the largest emissions per capita. In other words, the advanced economies to be making high-ambition material progress. And in that process, pulling in the major emerging economies alongside. China will be critical, as will be India, Indonesia, Brazil, in accelerating.

One of the things that I'm very focused on, and I know you are at the institution is, what's the role of the private sector and what's the role of private finance? As countries get more and more serious about it, as the citizens are demanding it, as policy moves, what role can private finance play to invest in, to accelerate, to build this move to a more sustainable economy? We're at a point to bring the thoughts together.

We're at a point where something which is an existential risk if unaddressed, unaddressed climate change is turning into a major commercial opportunity. The solution to the risk becomes valued. After all, if you're solving the biggest risk of our time, you're creating a lot of value as part of the process.

This interplay between where you started, likely with the U.S. and China, I'm encouraged by the momentum there. And candidly, it's one of the only areas where there is cooperation between the U.S. and China at present. And it's of course the most, in many respects, the most important area. If we can build on that private sector moving in behind, we could make huge, huge progress for Glasgow.

HANNEKE SMITS: And I think the private sector is moving right to and starting to see it also as you say. As a commercial opportunity, as an investment opportunity. Not just as a purpose that companies need to lead. And I think what I'm hearing you say is diplomacy alone is going to get us so far. Which to some extent was also the result or lack of results initially perhaps from the 2015 Paris Agreement. Which is clearly a resounding success from a diplomacy perspective. But in terms of effectiveness, there's a lot more that is starting to happen. With governments alone can't make the change happen. The private sector has to step in too.

Now, having said that, I do think that there are some solutions and policies that can be adopted to achieve results. And what do you see as examples of those?

MARK CARNEY: And actually maybe, just to underscore part of what was the success of Paris, and then I'll go to the policies… What was great about Paris... It was a success of climate financial diplomacy, and it absolutely had to happen. And to me, three things came out of Paris. First, was a very clear objective for the world of sub-two degrees and this stretch target of one and one-half degrees. That's what 195-plus countries agreed to. Secondly, the countries showed up with their best efforts domestically of what they were going to do to try to achieve it.

And crucially, there was an objective add up of those policies. They didn't show up and say oh, this solves the problem. In fact, they said we want to get to less than two degrees. And when we add up what everyone says they're going to do, it's going to be 2.6 degrees even if they do it all. And then there was slippage from there. That was the bad news, but at least it's objective. We have a framework that's objective.

And the third thing which really underscored the start was to bring in the private sector as part of this process in a much bigger way, a much more structured way than before. Now that last, all of those elements go into Glasgow.

And your question: The issue you put on the table is what's the relationship between policy. . . The way I look at it, what's the relationship between policy and what happens in the private sector? And what's the relationship, if I can borrow a phrase or word you put it earlier, which is about companies with purpose. And so a company that has a sense of purpose has a sense of... And I know your leadership around ESG and the broader set of discussions, if you're aware of your environment, you're aware of what your stakeholders want. And that's part of your purpose. You're anticipating where society wants to go, and also where policy will probably go in order to achieve it.

Now, what are the policies that are most effective at this stage? I think one of the things... And this is a point Janet Yellen and I made six months or so ago before we knew she was going to go on to even greater things. Maybe she knew, she probably did know at the time, I suppose. We wrote a long paper which I can distill into a couple of sentences, which is that if you have credible and predictable policy, the financial sector and most importantly the real economy will pull forward adjustment.

In my old life as a central banker, one of the most important things was the market could anticipate broadly which direction you were going to go. When you would broadly raise interest rates, how we would react to changes in the economy? And then the market would do a lot of that work for us because they would reprice interest rates and market interest rates and reprice other securities, which would affect what happened. And it made it easier for us to adjust if you had credibility and a degree of predictability. It's the same in climate.

A couple of examples of this: For example, in Europe, the ban on internal combustion engine on new vehicles after 2030. That's predictability. I'm an automaker. I'm going to sell into the European market. I have one, maybe two maximum model years that I . . . or models that I can produce with internal combustion engines and still sell. But I know that I really want to put all my effort into electric vehicles for the European markets, including charging infrastructure, including my work with suppliers. So I've got a future signal which tells me today what I should do. And that's driving innovation and investment.

I'm joining you from Canada. We have a carbon price of $30 a ton today. Mildly interesting. What's important is the government is legislating that, that price will go to $170 by the end of the decade. The $30 price is interesting. The $170 is significant for the business. And business investment is going to be driven off of that.

It's those types of policies. It doesn't always have to be a carbon price. It can be regulation, it can be requirements for fuel standards or emission standards. And even public investment in certain technologies such as hydrogen, such as aspects of carbon capture, which signal the importance or the opportunity that's there. All of those policies can help accelerate the investment that we need to get to where we need to go to.

HANNEKE SMITS: By putting some of those policies in place, it's really forcing companies to review how to allocate capital, how to put their budgets together, where they're going to invest and where they're going to disinvest. Because your example of carbon pricing in Canada, that clearly becomes a disincentive over the long term. And then companies have to act and come up with a plan.

You also mentioned the markets. And again, that's a feature in your book as well. Your profound belief in the market's ability to solve problems. So, if we think about the markets and if they're going to help us to join the battle against climate change, do you actually think we're ready from an infrastructure perspective? Which I know you have a view on from your previous roles to accommodate the necessary investment to achieve net zero.

MARK CARNEY: It's a great question, and I think the answer is we're getting there but we're not fully ready. For example, one of the things that we've been working on, really only over the course of the last five years, has been consistent and comprehensive climate disclosure. Not just what a company's carbon footprint is today, but how it's going to manage it tomorrow. And how senior managers like yourself... How it's managed and optimized. And where the opportunities are.

The TCFD, which you've been a supporter of from the start, is on the pathway to becoming mandatory. It's one of our objectives for COP26 for all the major economies to basically have the same type of climate disclosure as we have for financial disclosure. There's a framework for it that's called the TCFD. The U.K. is going to legislate it, Switzerland has put it in place, New Zealand, others. And Japan on a comply or explain basis. And actually, the IFRS, which of course does the accounting disclosure rules for 140 countries, is very likely almost certainly going to develop climate disclosure rules for those countries as well. That's a building block. But that's part of the infrastructure. It's necessary but not sufficient.

We also need to have taxonomies and indices that are focused on the transition. I mean, it is useful, to be clear. It is useful to be defined about what is green but this is a transition. It is a journey from where we are today. Which unfortunately is relatively part of our economy. And we need to move through the color scheme, from brown to olive to light green to kelly green, if you will. And a taxonomy or a way of representing the progress that's there. Because you may be in a position as an investment manager where you see an opportunity, where there's an alignment between a company that is de-carbonizing, has the potential to decarbonize with a big investment – could be the steel industry, could be the auto industry.

And at the point you make the investment, your carbon footprint as an investor goes up because you've invested in somebody who in a few years from now will be able to decarbonize. And you're making a huge contribution to the planet. You're also putting yourself in a position where you've invested in somebody who's going to be more competitive and profitable if that's your expertise.

We need the infrastructures so that you are at a minimum not penalized for that. From a carbon accounting perspective, that you get credit for the future. And there's ways to do that. Things like portfolio warming techniques and others that are being developed. All of that sort of infrastructure needs to be put in place. It is in process with experts such as yourselves and we need to finish the job on that.

Last point. I mean, there's more to do, but we also need some new markets. There are some missing markets here. And I am a believer in markets properly structured. And one of those missing markets is for carbon offsets. We have 1,300 – and it will be more soon – of our largest companies around the world who have net zero targets. Some of them have negative targets. Microsoft would be a prominent example.

In that journey from where they are today to getting absolute emissions down, there is value in reducing the overall footprint over time. The net in net zero. And the only way to do that is through offsets. And we need a credible market for that. We don't have it yet. That infrastructure is being put in place for that market. We're looking to launch something by the end of the year and grow it pretty quickly. This is a potentially a hundred billion dollar a year market from basically nothing.

And as you well know with markets, they work if they're credible. They work if they have the infrastructure. And that's why we have the best working on putting that in place. There is a lot of work still to be done. There's a lot of work and train. The optimist in me is very positive about it. And the only caveat is that as with everything in climate, we don't have that much time and we need to really move this at pace.

HANNEKE SMITS: I think you're right. Time is not really on our side. And that point is hitting home for governments around the world as well as companies. I do want to pick up on some of the observations you made around taxonomy and measurement. As you've also said it is how we measure value is critical. But there's some considerable challenges around clarity and standardized nomenclature and metrics, and how we hold companies to account.

The EU rules that have been introduced are a bold step towards some more comprehensive fiduciary duty. But how bold of a step do you think they are, and how critical is it also that regulators around the world actually align around a common set of metrics and taxonomy?

MARK CARNEY: I think it's important that they align broadly around similar taxonomies. I think my years being involved in regulation suggests to me that I'd be surprised if they fully align around taxonomies. But to me, it's exceptionally important for some form of taxonomy that has at its heart the transition and this decarbonization. This movement as opposed to a binary taxonomy or only having a binary taxonomy.

I'll make it tangible in a very non-standard way, which, when I think of my colleagues at the central banks – my former colleagues at the central banks now and both the Bank of England, European Central Bank with explicit efforts to incorporate climate change. Not just into their supervision activities of banks and insurers, but into the way they conduct monetary policy.

One of the challenges they have is not having adequate taxonomies of third parties that they can use to then differentiate between assets in the market. And they don't want to be the capital allocators. But equally, they need some market-neutral standard. And they need a standard that captures the transition not just the end state. That's one example. It's a microcosm example of a much bigger set of issues.

The taxonomy issue: Europe's led on it, without question. The core taxonomy has value but it doesn't have as broad a value as what we need, so we may need another instrument.

I think we can make progress through the private sector on using science-based targets which are climate pathways by sector, and actually aggregating them through portfolio warming and other techniques. That remains to be seen, but if we can get consensus around that, that would be helpful.

But I'll make a last comment, which overarches all of this. Which is there will always be an issue around these approaches. Whether they're disclosure or taxonomy. Where the common elements are building blocks and the different jurisdictions, different societies, it's a better way to put it, may have on top of that foundation additions. Because in the end, part of this is an expression of values. And if I can bring it. . . not necessarily taxonomy, but bring it back to disclosure. In the end, TCFD disclosure, core climate disclosure. The way most of us think about it is with respect ultimately to the enterprise value of a company. At some point, the impact of being on the wrong side of the carbon price for example, will hit the value of the underlying business. And if we have that information, markets can judge and pull forward today.

But there is a school of thought, particularly in Europe, about also assessing double materiality. The impact of the company on the climate or on nature itself. Even if that does not necessarily come back to the value of the company today except through some risk on social license.

Those judgments may be different by jurisdiction, by society. Which is why we can get to a degree of commonality. But I think there still will be some tailoring in different places.

HANNEKE SMITS: Summarizing, TCFD and disclosures are helping markets and market participants understand the risk that is in the system or inherent in companies as they're on a path to transition. For example, for the fossil fuel sector to actually understand the value or lack of value of what are going to be stranded assets and how they work through that. Or for insurance companies to understand the liabilities that they may be facing because of climate change. I think all of that comes out through TCFD. And allows market participants to better understand the financial impact that is going to have on the companies that are being assessed.

The other piece of what you're saying is there aren't really good benchmarks yet for how we measure the good that a company can do by helping us to get to a planet or a way of living that is more sustainable.

MARK CARNEY: Yeah, I think that's right. Those measures are being developed. And so, the double materiality, if you will . . . the impact on, for example, on biodiversity . . . here are efforts through . . . and there are reporting frameworks, the GRI framework of reporting is one example of that.

I think that the IFRS process for the so-called sustainability Standards Board, which will be an open process over the course of the next few years, a lot of these discussions will be at the heart of what is enterprise value-relevant. As you rightly say, TCFD relevant if you will, or consistent and what goes beyond that. And that certain jurisdictions will apply only the former and others will apply the latter as well. And this is a question.

Though I think we may be surprised to what extent more and more apply all of this type of disclosure. Of course, it has to be provided with some framework. And let me give one reason for that which is, one of the things I think we have learned in recent years is this concept of dynamic materiality. There are certain issues that weren't relevant five years ago, 10 years ago, but all of a sudden do become relevant to the value of a company. Certainly, and maybe it doesn't happen overnight, but it happens within the case of few years.

For example, in some jurisdictions, the U.S. as an example on diversity and a much, much clearer approach and more effective approach. Not just words but actions. In terms of company diversity of management, diversity of boards, diversity, true diversity inclusiveness within companies brought to the fore in a way that impacts broader stakeholder perceptions and valuations of companies there. We've seen it with climate and we'll increasingly see it with climate. And potentially biodiversity in nature for the impact it has on value. Maybe not today but prospectively in the future.

HANNEKE SMITS: You're right. Certainly, from looking at this through the investment lens, it's hard for me not to do that as CEO of an investment management company. A lot of us have are clearly very focused on considering the environmental, social, and governance issues as we evaluate companies. And to your point, it's been a lot of focus on the S and the G. And it's not transferring to the E as well.

One topic that gets debate in the space is the effectiveness of shareholder engagement. Thinking about the example you mentioned of diversity. Typically, as shareholders you can actively use your vote by voting for or against, say, certain director appointments. If you're not seeing that diversity is being achieved, you could vote against certain director appointments. That's proven so far. A bit harder perhaps on the E of the ESG.

With the possible exception of some of the transition plans that we started to see some companies publish, how do you suggest that investment managers hold companies to account so that we can actually make progress?

MARK CARNEY: It's a great question. Very live issue as you know. And one of the developments is explicit votes on those transition plans. A so-called say on transition. There's been a number of companies, major companies. Unilever would be an example. I think probably was the first one. As in many things in sustainability, actually Unilever the first one.

But 15 or so major companies, largely in the U.K., North America, have volunteered, voluntarily having votes on transition. So not proxy battles on that, and explicitly on their transition plans.

I think it's a very interesting argument. It goes to the question of how successful have been, for example, say on pay. Advisory resolution where we have in the U.K. as you well know, a formal structure for that and a convention, I think is the way I would put it, in terms of certain thresholds that doesn't have to be defeated. The pay proposal. But there are certain thresholds where it becomes uncomfortable or deemed inappropriate for boards of sufficient shareholders have voiced or voted against.

That's possible with transition plans. Just to give the both sides of the argument, one aspect of this is that in the end this is strategy and you're voting on a core element of strategy. And are shareholders reaching through the veil of governance into running the company. I can see the argument. However, the importance of this and the importance of this for the investors... The increasing importance of this for the investors and stakeholders suggests that there does need to be heavy engagement on transition plans going forward as they move from transition objectives to actual plan.

The first is... The most formal is an actual vote structure. Let's see how these rounds of votes go over the course of the year. But the active engagement on these issues will be increasingly important. And I would say it's interesting, with two years ago. Hanneke, you have this perspective as well. I've heard from a number of CEOs that would say that. . . it was interesting, I raised climate as a longer-term issue. No shareholder ever raises it with me as a CEO. I don't run into any CEOs who say that anymore. The engagement is clearly there and the question is how much more should it be structured.

HANNEKE SMITS: I agree with that. I think they're all focused on it. But it's then about as shareholders as well, about assessing the credibility of those transition plans that are being put to us. And to your point, what is the role of the shareholder versus role of the boards in that regard as well.

Just shifting back maybe for some of the final questions here to value. How important in this backdrop is it for companies to reset really their social and strategic actions to reflect the values that clients and investors are increasingly demanding, moving away from pure financial values?

MARK CARNEY: It's ultimately a question of how one runs the company, to the extent one runs a company with a sense of purpose and alignment with stakeholders. And the way I guess, to take a step back. . . The way I put this, my experience in studying of the evidence as well, has been that this broad alignment with values, values of stakeholders, broad alignment with ESG and lots of challenges in measurement. But if we get to the heart of it, the out-performance comes from a number of areas.

And one of them is that the management that tends to focus on these issues also tends to think about broader structural long-term changes in the economy. They're focused on sustainability, but they're also recognizing that the digital revolution, changes in machine learning and artificial intelligence are having these structural changes. They're more strategic and more prepared for broader shifts. That's first.

The second is, I do think that the impact – and there's more and more evidence of this – the impact on employees and other stakeholders and the alignment that comes from that and the quality that comes from that is one of the things I go through in the book. It's about the distinction. The classic sort of . . . being an economist for a second, but the classic element theory of the firm is all about the relative costs of contracts. External contracts versus internal norms. You can push out the influence of the corporation if you have clear purpose in alignment with your stakeholders. And often that alignment comes around values.

The last point is more of a defensive one, but it's no less relevant for it. And it goes back to what we were talking about a few minutes ago, which is there are some elements or values in society that no, they're not material today, but they could be material tomorrow. And they could . . .we do get these situations where there's jump to default if you will with social license. And the extreme damage that is done to companies if they step afoul of that.

We have an example in this week when we're having this discussion with football in Europe, which is a total misread by the business side of these institutions of the values of their stakeholders, their clients. But also, from my read of the commentary, of their players and senior management on the pitch. That's an example of something that is value-driven that one wouldn't have thought necessarily affected the underlying economics. But if to put to the test, absolutely has. There's multiple, multiple channels through which this comes.

HANNEKE SMITS: I agree with you. And there's also a lot that's been changed over the course of our careers. Just thinking about the next generation coming into finance. While I think over the last three decades or so, there's been an enormous amount of change with respect to technology, regulatory environment, necessary skills. But also to what you're just talking about.

At least in my observation, this generation has a far greater consciousness with respect to the challenges that are being faced by society more broadly. And they're very keen to live their values. Knowing that and given these changes, I have no doubt that someone with your background is often asked for advice by students or people looking to enter financial services or any sector. And I'm sort of curious what advice you might either give your own 23-year-old self today, or younger people today as they think about their career?

MARK CARNEY: It's interesting. It's a great question. If I could go back to my 23-year-old self . . . All the things I would have done ... But I do think, and you've seen it. . . I know I've seen it from your career, and I believe I've lived this in mine: It is exceptionally important to work with people you respect and organizations whose values you share. And the most unhappy people – and unfortunately, I've worked with some very unhappy people over the years – are those who tried to force themselves into a situation because they think it's the right thing to do. Or because they think they'll make more money.

Life is very short. Days might be long, but the years are short. It sounds trite, but it really is true that the success comes from that alignment. And part of the way you can judge that alignment is just the people you're going to be working with. That's the first thing.

The second big point I think I would make and advice is that there are big shifts. There are big structural shifts that happen. The past is not necessarily prologue. And you think of the shifts that we've been through in terms of geopolitics, fall of the Berlin Wall and everything that changed with that. This rise of openness and globalization. This fundamental change on the digital side, and how all the huge economic changes are happening with that.

And we're at the cusp. We're just at the start of that sustainable revolution. Which will change the way business is done and the way we live. In some ways we can anticipate, but many we can't. And in parallel, machine learning and artificial intelligence are a revolution. But in those circumstances, when you're going to have to bring the two together. Where you're going to have those big changes, the more you're working with people you value, n a situation you care about, or for an objective you care about, a purpose you can identify. . . That's another key test. The more successful you'll be through those big changes and the more you'll just enjoy yourself.

And the last thing is one of the most important things for health and success is to sleep at night. And it's much easier to sleep at night if you think you're doing the right thing. And one of the great joys I had when you and I were at the Bank of England, was the purpose to promote the good of the people of the United Kingdom. That's what we're trying to do, day in and day out. It's easier to rest.

HANNEKE SMITS: Now, it's a fantastic cause to get rallied around. And I agree with you that you have to start with the people, and not focus. . . Sometimes individuals can be unduly focused on something that may look good in the short term, but are making the wrong trade for the long term. And it does come down to the people. And as you say so eloquently. The purpose of what you want to achieve as well as whether it aligns with the people you'll be working with or the institution you'll be working for.

Mark, it's been a real pleasure to be speaking to you on the opportunities and challenges in addressing climate change. And I'm really heartened by the growing commitment from global organizations, regulators, actually leaders like yourself that are really coming together to tackling these issues head-on, which I think is not only encouraging, but I would actually posit, it's really critical. We really all need to join hands internationally, public, private, third sector. Altogether, I wholeheartedly agree with you on that point.

Thank you again for taking the time today. It's good to see you.

MARK CARNEY: Thank you, Hanneke.