

# BASF Capital Markets Day 2021 Transcript Q&A – Keynote March 26, 2021



## Contents

<b>1</b>	<b>Keynote</b> .....	<b>2</b>
1.1	CO <sub>2</sub> targets .....	2
1.2	Technologies .....	3
1.3	Capital expenditures .....	5
1.4	Emission scopes, energy mix, regulatory framework .....	7
1.5	Recycling.....	11
1.6	Customer interest.....	12
<b>2</b>	<b>Current trading and corporate financial targets</b> .....	<b>14</b>

## 1 Keynote

### 1.1 CO<sub>2</sub> targets

**Chetan Udeshi (J.P. Morgan):** At the end of 2018, BASF announced the target of carbon-neutral growth until 2030. Today the target is to achieve 25 percent CO<sub>2</sub> emissions reductions. Besides investor focus, what drove this significant change? Has the availability of low-carbon alternatives changed? And has this been a key driver for the target change?

**Dr. Martin Brudermüller:** Basically, we don't do anything different than we have actually announced in 2018. The big difference is: We made so much progress over the last two to three years that we accelerate the one or the other measure that was planned after 2030, which is now ahead of 2030. With this, also the reduction potential which was thought to kick in after 2030 is now actually contributing before 2030.

With this, the ramp of actually being carbon neutral until we are enabled with our technologies for absolute reduction has actually accelerated. I think this is per se very good news because I think you see that we are dedicated. This is also due to the technological strength of BASF which is always a pride and also an important success factor for us.

The other part is, I think, what I mentioned. We need this engagement with politics to fight for positive framework conditions. I think what really changed until 2018 is the customer interest. We did not have any customer basically seriously talking about this with us. But today I have letters from them in writing. They basically tell me, "Give me a plan on how you will actually provide me with a low CO<sub>2</sub> footprint in 2030."

I'm happy that this whole thing accelerates. The demand from society, the translation into politics, that all accelerates. I think there is no way out of that anymore. I think it is mainstream. I think it is also a surprise that we see that Covid did not actually decelerate this whole development. It's actually quite interesting: It has accelerated the development.

With this, I think we are on the spot. I am deeply convinced: This will be a differentiating component for the future and I think it is also contributing to the market capitalization of BASF. We can clearly demonstrate: We have solutions to these challenges. I think this is differentiating us from the competitors. This is why it was important also to radiate this confidence which we have in this progress with you, because I think it is important now, talking about ESG, where to put your money – you want to be in chemicals –, with the company you think is best prepared for the future.

I think this is what we really want to say: that we made huge progress. We always said, even at the beginning, that beyond 2030 we want to reduce in absolute terms. So, basically, what we say now is: The progress allows us to accelerate. I think I radiated this as well: We have a lot of ideas.

This is maybe an important message for you, too. I think we talked about this in the one or the other meeting before: We have a huge motivation of our own staff. They love where the company goes to. They come up with so much creativity on the technology field.

What I mentioned with the steam generation, to electrify steam generation using heat pumps, that is actually something we had not so much on our mind in 2018. We just realized some time ago how much potential there is.

I think, overall, that is a very positive message to you. We are confident. I think it makes BASF more valuable in the future. Customers are approaching BASF to work with us. So great!

**Chetan Udeshi (J.P. Morgan):** How much of the 25 percent planned CO<sub>2</sub> emission reduction is dependent on government funding? In other words, what is the realistic reduction achievable without public funding?

**Dr. Martin Brudermüller:** I won't say too much because this is now getting political. At the very end, there are different schemes that go there, and we have applied for them. I think it is fair and we hope that we really get support. I think this is also shown and demonstrated on the other part. We go now step by step.

But let me really stay with this because it also relates to competitiveness and competitive information.

## 1.2 Technologies

**Charlie Webb (Morgan Stanley):** Do you believe there will be opportunities to license out some of these decarbonizing production processes that you are developing to other market participants? Do you have IP already in place for any of these new production processes?

**Dr. Martin Brudermüller:** Very clearly, you can imagine that part of the Carbon Management, particularly the research part, is certainly that we generate IP on those technologies, and we protect our, let's say, innovations. That's very clear.

But you saw on the other hand – and I mentioned that explicitly: We team up. I think the challenge for the industry is so big and the timescale is so short, we have to actually share our capabilities and then also share the fruit from that.

I think the e-furnace project is a good example where, let's say, a steam cracker company or one of the companies that you can buy steam cracker technologies from, Linde, is very advanced in this. On the other hand, we noticed that SABIC has similar interests to us. So, we joined forces and we saw that the different capabilities actually fit very nicely together.

I think it's very fair. We want to generate, on the one hand, diversification and differentiation from our competitors. But on the other hand, we certainly also want to help the chemical industry decarbonize relatively quickly. So, in certain areas, I think that can clearly be a model that you license out.

If you just take the steam cracker example again: Everyone buys steam cracker technology from a couple of companies today. So why not also an electrical furnace in the future? I think it could also be an income model for BASF in the future. If you have generated that technology, then you can certainly earn money with it.

**David Symonds (Shore View Capital):** How much will the new China plant or Verbund site reflect the future of crackers – electricity-fed furnaces, portion of renewable energy in mix? What will the CO<sub>2</sub> intensity be against Ludwigshafen?

**Dr. Martin Brudermüller:** You have some restrictions or, let's say, it's more complicated and getting more expensive if you have to replace and change something in an existing plant. It's easier if you design something totally fresh and you start with a different concept.

As I mentioned in my speech, the cracking is partially not only going to olefins, but partially cracking down to one simple C atom at the very end, which is then methane, which normally is used basically to close the loop and use this gas to then heat up the furnaces. We now use this as another raw material where we actually save fossil raw materials coming from other sources. If you design that from the beginning, you can actually nicely feed this in; it doesn't increase investment cost, but gives totally different opportunities.

One part all over the world, actually, is the big aggregates like the compressors; they are all fed by steam because a cracker is actually producing steam. And we will do this electrically from Day One. We will use e-drives instead of steam turbines and, with this, we will free up the steam for something else.

Actually, we have factored in all that is possible into the new setup in China. I make it very clear: It will be the most modern setup which you can find anywhere in the world if you compare it with other petrochemical sites. It will be highly digitalized. It will have all these, let's say, innovations on the technology side in it. That gives a totally different starting base also to build on that because other things will come.

In that respect, you cannot compare that and immediately copy it in a site like Antwerp or Ludwigshafen. This is why I also mentioned that each and every site has to have an individual plan doing this. There is no "one size fits all; I have three measures, apply them and that's it." You have to really study the setup, which is partially historically grown, with limits and opportunities to really take these technologies and have the right portfolio to move forward. And the advantage now in China is that we can really do that from scratch.

**Andrew Stott (UBS):** In regard to your joint efforts with SABIC and Linde, what is the current difference in cost between a conventional furnace and an e-furnace, pre subsidy? What would be the impact on ethylene cash costs per ton?

**Dr. Martin Brudermüller:** For competitive reasons, I will not tell you. It's not prohibitive, but it is also not insignificant.

Where we don't have low energy prices, we won't scale up. Certainly it will also become a little bit more economic when you build this big. We now have to make the limited amounts we will get out of that cracker oven because it will actually produce ethylene, a significant amount of ethylene. Then we will, with the Mass Balance Approach, allocate this into exactly those areas where margins are higher, where there is a customer industry with applications that allow for higher costs. And then we will scale it up. I can only leave it with this. It is a little bit higher on the capex side and it is also higher on the opex side.

**Thomas Wrigglesworth (Citi):** Is there a carbon price at which all technologies work for decarbonization? If so, what is it? Do you envisage that your decarbonization framework and targets, which include inorganic growth, have forced you to revisit your M&A pipeline?

**Dr. Martin Brudermüller:** There is a relatively big spread in abatement costs, and this is not surprising. I think I mentioned that some of that stuff, for example the replacement of steam turbines by e-drives, has a very low CO<sub>2</sub> price equivalent. I think it's a "no regret" move.

It's also very clear that with the last amount of CO<sub>2</sub> which you will maybe have to reduce on the last meters of the journey when you approach 2045 to 2050, there is stuff that has abatement costs of a couple of hundred euros per ton, I would say. But I'm not worried about that because there will be so much happening until then: first of all, technological progress, different regulatory frameworks. I think we should not be so worried about that. And then there is a significant part or a relatively broad curve where you need higher prices than you have currently, as you have, for example, certificate prices in the ETS.

That's why I reiterate all the time: Things have to go together. We need a secure planning horizon for CO<sub>2</sub> pricing. Certainly, CO<sub>2</sub> pricing has to increase over time. The best would be: You have actually a perspective to know for the next 20, 25 years exactly how that is ramping up. If that then comes together with what I said earlier, a positive enabling framework and also the energy prices from production really go down to the consumers, then actually this is step-by-step possible to mitigate. Then we will crawl up the abatement ladder of the costs. But it is a relatively high spread from the low, let's say, tens of euros to a couple of hundred euros.

### 1.3 Capital expenditures

**Andrew Stott (UBS):** Regarding the capex outlay for your new CO<sub>2</sub> target: Is this a gross number, so before assumed subsidy? If so, roughly what percentage of this capex might be covered by government incentives, either direct subsidies or fiscal benefits? Or is this just too early to know?

**Dr. Martin Brudermüller:** It's a gross number certainly because we cannot plan for any share because we don't know what the funding at the very end will be. And the share of funding is very difficult to predict because there are so many different funding schemes and not each and every project could be applied for the respective scheme.

What you can imagine is that if you go for a very early stage, higher risk technology with a relatively large effect on decarbonization in a pilot plant and in a very early stage of development, you get a higher share of funding and risk covering by the public than you actually do when you are later in the process and you might even scale up. We don't expect so much support anymore when we are building world-scale plants.

But I think it is fair now, with the immense pressure on decarbonization which is on the industry basically all over the world, that also the public is supporting that. And we apply it now for several projects and we will then see how that comes in. But I expect for the first step a significant funding participation.

**Chetan Udeshi (J.P. Morgan):** How do you ensure that decarbonization investments of BASF are shared by others? Chemical companies with no upstream production assets in theory don't have to spend the same level of capex for decarbonization. Are you demanding some prepayments from key customers to fund your decarbonization spending? We are talking about more than €10 billion euros from 2030 onwards. This is a significant amount.

**Dr. Hans-Ulrich Engel:** I think what we need to look at is: Where is BASF in the respective value chains? What do our suppliers do?

As Martin mentioned during the keynote: We'll start Monday of next week to reach out to all of our suppliers and start intense discussions about Scope 3 because what we are requesting from them will be exactly what our customers will request from us.

How this will all work out in the respective value chains, I think, needs to be seen over time. Let's keep in mind: What we're talking about here is a program that we now intensify that will go to 2025, out to 2030 with the clear targets that we set ourselves. There is a lot that still needs to be detailed, worked out in detail. I'm actually looking forward to what we will have to offer, and we'll surely keep you updated as we go forward with our Carbon Management program.

**Dr. Martin Brudermüller:** We are leading on the base chemical side because, at the very end, if the customers want to have zero emission on their sales products, they have to include the very first step, the base chemicals. So, now you can say: I buy my stuff with someone who doesn't have the base chemicals, but in the accounting, they get all the CO<sub>2</sub> that comes with the raw material. If that company and supplier have no solution for how to reduce, the customer will always have that in their backpack.

So, if we are the integrated company and we have a solution for that, it might be more expensive, but we have a solution. I think this is a differentiating opportunity. This is also why we will not give up. We actually see encouragement in having a solution for base chemicals, because this is a real differentiation.

I'm sure we will reach a point someday where customers pay for it because they are happy that there is a company who can solve that part of CO<sub>2</sub> that comes with the final product. I'm very positive on this opportunity to differentiate.

**Sebastian Bray (Berenberg):** At current European electricity prices, what is the operating cost position of an electric cracker at scale versus one heated by natural gas? What could be the implied cost of refitting all of BASF's crackers globally to run on electricity? How much retrofit is included in the €4 billion capex to 2030?

**Dr. Martin Brudermüller:** There is no money in there, in the retrofitting because, as I said in my speech, this is now a pilot plant to see whether this is a reliable technology. We have not factored in anything in really applying this on a big scale commercially in our crackers. That will be beyond 2030.

And I made very clear: If there is not the framework condition to close the gaps in both investment cost but also in opex, then this is simply not going to materialize, at least not at the scale as is wished by some in society.

That is where we have the chance to work on the framework conditions. You understand that I will not mention a number here for competitive reasons because I know also some competitors are in the call here. But under today's circumstances, it is significantly more expensive, both from the investment side because although the electrical infrastructure is adding costs and also the running costs with the energy price, particularly with the EEG and everything on top, are more expensive compared to natural gas.

If these smaller-volume trials work – it's not a very, very big plant; I said it's a multi-megawatt oven for the first time, and we use the Mass Balance Approach for some high-value products, this might be the building block to bring them totally to zero CO<sub>2</sub>.

I think it's very clear, and this is what I really want to radiate here: We now have all these options. We have all the technologies. We test them. We do first bigger steps and then the order and the scale will depend on the framework conditions. It will also depend on where we do it. It might be that in Europe there will not be the framework conditions and we see them rather in China or in the U.S. Then, we will proceed much faster in those regions than we actually do here. I think this is also the charming element of that.

We have looked into this in detail. We are very clear about what we can do until 2030, but the pace after 2030 will depend a lot on the framework conditions. But we have options and I think this is the important part.

#### 1.4 Emission scopes, energy mix, regulatory framework

**Jaideep Pandya (On Field Investment Research):** What is the split between Scope 1 and Scope 2 emission reduction by 2030? How will an increase in renewable energy purchases change the energy bill of BASF? Do you envisage buying carbon credits in the market if you execute this plan for 25 percent reduction by 2030?

**Dr. Martin Brudermüller:** I think it is very clear: You do not have the pattern about Scope 1 and Scope 2. This is different in each and every technology.

You saw on the chart (slide 11) that the energy demand for green energy is kicking in beyond 2030 because that is when the other 75 percent of CO<sub>2</sub> have to be actually decarbonized. And this is where we have then to scale up the availability of green energy.

As I said earlier, offshore wind parks, non-subsidized, are competitive with the energy prices of electricity which we produce in a gas-fired plant. You can imagine that this is a good chance from the production side, actually, to replace over time, also with all the innovation coming in, the current cost.

I think what creates the headache in most of the markets is actually what is between production and the delivery point, because you have to go through grids where you have grid fees, you have levies and taxes on energy, and in Germany you have the so-called EEG, which is an extra levy which covers actually subsidized alternative or renewable plants from the past.

I think it is not so much on the production side where we expect that the electricity bill or the energy bill gets bigger. It is actually that we really get the support from the public and from the politicians that we can stay competitive because it is not so much the replacement of the way we produce energy. You know that in most of our large sites we already produce our energy ourselves today; only a minor part of the energy is actually purchased from the outside.

This is the part of the equation which is not solved today. But we certainly hope that we have a very clear picture in the different regions until 2030 because the main part is then kicking in beyond 2030. And by then, these factors have to be clear.

Let me be very frank: Decarbonization will not continue after 2030 if that is not a given framework because otherwise that will not be competitive.

As for carbon credits, the only thing I can say is: First of all, I think, additionality is important. We don't buy certificates to actually catch capacity, limited capacity from the market, from others. We actually want with our activities that additional capacity is added, either by participation in those producing assets or by a PPA.

I think there's a big difference in terms of origin quality. Let's also see: I expect that regulation is setting a clear framework on which kind of certificates are in and out of our balance and considerations.

**Thomas Wrigglesworth (Citi):** You have been basic in oil and now plan to be basic in renewable power. Yet your view on oil has changed over the years. What gives you conviction that renewable power will be scarce? And over what timeframe? In the long term, all power must be renewable and therefore commoditized.

**Dr. Martin Brudermüller:** I think this is a long journey. I think I expressed this. I would say that renewable energy is in the future the same magic ingredient as maybe, a few decades ago, natural gas was, particularly on the energy side.

If you look at the situation – I think I made this clear – from an innovation point of view, from a cost point of view, I think this can be really competitive. But it is very clear: With the huge amount of energy we will need, there are not so many renewable technologies that can cover the chemical industry. You can supplement with solar, at least in Europe. But the main asset is, I think, the offshore wind parks.

If you look actually at the capacities that are planned at the moment within the EU, it is not sufficient to cover all the needs at the same time. For that reason, we will have a question of availability. We have a question of regional spread. You might have this, let's say, production in areas where there is no consumption. That is also why it is connected with the grid, which I have addressed.

I think it needs a comprehensive strategy at the very end. If it remains a scarce resource, there will be a fight for it. On the other hand, there might also be prioritization. This is also what I showed you on our technology scale, which technologies make more sense under certain framework conditions.

There are many variables in the formula which, I have to say, is a little bit foggy today, at least here in the EU. We have talked now a lot about the Green Deal and about the ambition level, very, very high altitude. It's now time to come back and to be on the ground and say how we actually do it, what are the right measures?

It can only work if, on the one hand, innovation, I would say, boldness, entrepreneurship from the industry come together with policies that are actually not generating a punishing framework, but generating an enabling framework.

One thing is definitely that we need many more locations and much quicker availability of locations to build offshore wind parks. That's very clear. I think it will become transparent very soon that you can have targets politically, but they will not materialize if we don't cater also to the implementation.

**John O'Donnell (Viriato):** Which divisions have the lowest hanging fruits with respect to CO<sub>2</sub> reductions? What percent of group sales do they make up?

**Dr. Martin Brudermüller:** I cannot say much on this. I can only say that actually all the operating divisions have taken this up as an opportunity. They tried to translate into those products where this makes most sense. This transparency about the carbon footprint is actually for our own people to learn about it. We learn now on the product offering. We can even go to a customer and say, "Are you aware that option A is more CO<sub>2</sub>-intensive than option B?" And then you have the plans how you can reduce this by different steps.

I would say, it penetrates the whole portfolio. I could not allocate, let's say, shares. But it's the charming element that it's actually going throughout the Verbund portfolio. And the nice thing is actually – I think I emphasized it – that the Verbund is having a real good opportunity with the Mass Balance Approach that we really can apply all the levers for reduction for almost every product in the portfolio.

It depends on this combination: transparency and willingness of the customer. But I would say, it's penetrating everywhere. So please understand, I cannot give some areas because I'm actually very happy that it penetrates so vastly.

**Jaideep Pandya (On Field Investment Research):** It's a bit political: What is your view on carbon border tax as a protection for you against competition from regions which are not carbon efficient? In connection to that, what is your view on renewable naphtha in Europe? Does that feature in your plans to reduce CO<sub>2</sub> Scope 1?

**Dr. Martin Brudermüller:** Well, now I'm in the middle of a political minefield, I would say. I understand where carbon border adjustment measures come from, so somehow compensate and having a global level playing field. However, my starting point is: The best would be that we don't need any of these mechanisms at the border by exactly doing what I mentioned several times already.

If we make the innovation compatible with an enabling framework and we manage this transformation without needing a correction, it ensures that we, all along the transformation, have competitiveness internationally. I think that already is something that makes others want to copy what we have.

I see major problems – I think this is also what Brussels struggles with – how you can make this WTO-compatible. And also very clearly: If others import and they have to go through this mechanism, you have to have a fair, let's say, transparency: How big, actually, is the CO<sub>2</sub> footprint of that product – that's the first question you can talk about for a long time – and what kind of energy was used to produce it? There might be even products with renewable energy coming in where then the border adjustment measures do not have any effect.

I think it's a very intense discussion now. I would rather find it useful if we have an overall setup where we don't need border adjustment measures.

**Dr. Hans-Ulrich Engel:** On the renewable side: As cracker feed, yes, we are using renewables, but at this point in time, I think it's fair to say, only to a very low extent. As you've heard, we are working on other ways. This is more in circular where in various ways we're finding routes to use pyrolysis oil for our cracker feed.

On both areas, as Martin has alluded to, to fill the 250,000 tons that we are targeting for 2025, it's still a way to go, but I think we're on a good path overall.

**Sebastian Bray (Berenberg):** How much does BASF expect its free CO<sub>2</sub> allowances in the EU to be reduced over the next five years? Why is the electricity use rising so heavily to 2035 – mainly e-furnaces?

**Dr. Hans-Ulrich Engel:** On the allowances: We enter the fourth trading period in a very good position, BASF's technology in many areas is leading. As a result of that, we're getting certain allocations of certificates.

The question is now: What's going to happen with the increased reduction targets from 30 percent to 55 percent? That path is not yet clearly defined. As a result of that, I do not yet have a good answer that would allow you to somehow reflect that in your calculations. We need to see how the political discussion develops there and what that then means actually with respect to certificate requirements and allowances.

**Dr. Martin Bruder Müller:** As for the strong increase in green energy demand beyond 2030, direction 2035, 2040. That is actually the scaling up. And yes, it could be the e-furnaces. But I mentioned already that we will decide the order on the abatement cost and the framework condition.

But one thing is very clear: That is then the area where you have to also shut down cogeneration plants and basically replace them with green energy, both directly on the electricity side, but also using the green electricity to produce steam. This is where it really scales up dramatically.

**Christian Faltz (Kepler Cheuvreux):** In terms of terawatt hour per year in 2030, what do you believe will be the split between own power generation assets and bought energy?

**Dr. Martin Bruder Müller:** There is no target at the moment because it depends also on realism: What is actually possible and how many projects are there? The only thing that's sure: If you want to also mitigate the availability of it, you need to have a portfolio of different sites and locations and different assets to actually flatten the curve.

It simply will depend on the acceleration of projects; who are the partners with whom you work?

I would say, we are fairly open to this, but at the very end, each and every project has to be decided with its own investment logic. You can be sure that we go through all these projects as we go through every BASF investment project. It's simply too early to say. We have a high flexibility. But what is also very clear: It will become a global portfolio because we don't talk only about Europe.

## 1.5 Recycling

**Elliot Jones (Fearnley Securities):** We note BASF's recent commentary around the use of chemically recycled feedstock in Styropor packaging. How is the chemical recycling side of things going with regard to receiving pyrolysis oil? Is the target of 250,000 tons of naphtha for 2025 still on track?

**Dr. Martin Brudermüller:** This is still the same target. It is a challenging target; I have to say this. I think you name the right lever here, which is to build up the capacities for producing the pyrolysis oil, also setting up the waste streams, basically the raw material for the pyrolysis oil. I think this is the major challenge.

It is not so much a challenge for us to employ more of that raw material and substitute fossil-based ones. I can also say that we have a very broad project base throughout the Verbund with many customers in different industries. They had to scale that up and ask for bigger volumes. I would say, both from the end and from the beginning of that value chain, I think we are prepared for that.

I think there's also some legislation going around, particularly here in Europe, where we address in the Green Deal on the one hand that circular is a must going forward. I think we need an enabling framework. We need support and clear conditions on how to employ chemical recycling. This is not meant to compete with mechanical recycling, but we will have mechanical and chemical recycling.

We need a new way of working together to accelerate this between the industry, the chemical industry on the one hand committing and taking money to make that possible, the customers willing to buy these goods and the politics to actually generate an enabling framework. There are many question marks on this. But from our end, we are prepared to deliver on that target.

**Georgina Iwamoto (Goldman Sachs):** I believe you have stated the China Verbund site will be set up to accept recycled, ChemCycled raw materials. What are your assumptions in the percent of fossil-based raw materials you will be able to replace with renewables in the initial phase and also longer term? Are there limitations to replacing all cracker feedstock with recycled materials?

**Dr. Martin Brudermüller:** In China, I think, ChemCycling and recycling plastic is just going to start. It's far behind what we see in other regions. There are basically no established recycling circles, not even on the mechanical part there. We discussed this with the government and government officials. They are very interested in this because, actually, it would allow them to close the loops.

If you just think about the city of Zhanjiang, not so much known to the wider public: It's a city with about seven to eight million inhabitants. So it has also a significant amount of waste.

I think if you discuss that, you have to start from the very, very basics: collecting the waste, then actually sorting it into the right fractions which you then also can use over there. So, there's a long way to go.

But the important part is that technically our plans are feasible to do that. Whenever that ramps up – China is very quick in ramping up – we actually can go into this.

Let me also be very clear: This only makes sense if your customers ask for it. There is increasing interest to talk about that with Chinese customers. But I would say that the push for doing this and going circular is much higher in Europe than it currently is in China. But I think the fact that the waste recycling initiative is directly reporting to President Xi actually shows how high it is on the agenda. I think it is fair to expect that we will see rather quick regulation and progress over there. We just want to be prepared and want to participate in that whenever that chance evolves.

## 1.6 Customer interest

**Charlie Webb (Morgan Stanley):** Can you provide a bit more detail what “above-average volume growth of products with low carbon footprint means” in relation to current chemical growth? Similarly, what premium do you believe these solutions warrant?

**Dr. Martin Brudermüller:** I think this is a very general question. You know that our Verbund and integration means we drive value chains. I think you could learn that the heavy CO<sub>2</sub> load is at the very beginning of the value chains. The further you go down, the steps do not add so much CO<sub>2</sub> anymore. And you know we have a very broad portfolio.

But one thing is for sure: Going into the future, we have to look also at the CO<sub>2</sub> footprint of the respective businesses. You know that with our SBUs, the Strategic Business Units, we have different or separate, let's say, growth rates for them. And certainly, in these areas where I think the customer pressure is high to reduce CO<sub>2</sub>, and where the opportunities are good to reduce CO<sub>2</sub> per kilo of product, that translates faster and more quickly also into growth on the one hand, but also in return on margins.

For investments, for business decisions, for offerings in the market, the CO<sub>2</sub> footprint will be a comprehensive part and will not go away anymore.

**Laurent Favre (Exane BNP Paribas):** You started to talk publicly about the cradle-to-gate approach many months ago. What has been the early feedback from customers? How confident are you that you will be able to realize the pricing premium required to offset the higher costs related to decarbonization over the next five years?

**Dr. Martin Brudermüller:** Hardly a week goes by where I do not get at least one letter from a customer who tells us that there is a certain timeframe when they want to see the products they buy from us with a reduced CO<sub>2</sub> footprint. Very often it's something like 50 percent at the end of the decade.

So very clearly: If you start and engage in discussions, that's exactly what we would like to do because, with many of these customers, we already have a strategic partnership for a long time. And, actually, with all the other stuff you discuss about innovation, there is now one additional element which takes more and more space: it's exactly decarbonization.

If you talk about it and you say, "OK, I could apply recycled feedstock, I can also apply renewable energy and I can take bio-based ingredients or intermediates," it automatically translates into cost adders. I think where we are is that there is a kind of settling of realities that this is not for free.

The question, at the very end, is also for customers: They can ask you for that, but if you cannot offer it, where should they actually go? I think there are not so many companies that drive this so systematically, with this transparency from the very beginning.

You sometimes see in these discussions that from a pure idea to make it happen, it's a long way. But I think we see that with a lot of customers who actually engage: They know it will not be for free, but they still engage with us into strategic plans and going step by step with this.

The interesting thing is: It is not only a single industry. I would say, you have this kind of lead customers in almost all the industries. This is also why our operating divisions now are basically adapting these parts in their marketing approaches, offer solutions and ideas. With that, I think it's spreading very quickly, and the number of customers is going up quickly. And it's not only Europeans, it's actually international accounts too.

## 2 Current trading and corporate financial targets

**Christian Faltz (Kepler Cheuvreux):** Can you please update us on current trends, including potential supply chain issues stemming from the Suez Canal blockage, Texas freeze and COVID-19? How is the continued chronic semiconductor shortage in automotive affecting demand from that very important customer segment at present?

**Dr. Hans-Ulrich Engel:** I'll start with the question on Suez. Apparently, we have a captain who is an artist as long as he's in open waters and not as skilled once he starts to enter more narrow waterways.

There's a lot of speculation on the effects. In fact, at 10 o'clock I had a brief call with our supply chain team. There are several BASF containers stuck also now in the Suez. Nothing that I would call dramatic at this point in time. But the key question is: When can this ship be moved again? Talking to the shipping lines, the expectation seems to be: some time during the weekend. But at this point in time, that's all speculation.

If that does not happen, you need to reroute and go via South Africa which typically takes seven to ten days longer. But nobody has made that decision at this point in time. They're all waiting and hoping for a quick reopening of the Canal.

The second question was on the freeze, which, by the way, was not only in Texas; it more or less affected the entire U.S. Gulf Coast. On our side, we're up and running at all sites. The last site to start up and the last big plant to start up already on March 7 was the cracker in Port Arthur. But the supply chains are still affected, I have to say. That is a very close network at the U.S. Gulf Coast. Other companies got more severely hit than BASF and it takes apparently longer to work its way through the system. So if you look at the number of outages that are still reported, the number of force majeure situations: It's significant.

On our side, our estimate has not changed. We think, this will be roughly an impact in Q1, an EBIT impact, in the order of magnitude of high double-digit million euros.

The third question was the COVID-19 question. I think, as BASF, we've put all precautionary measures in place as early as we could. We have at none of our sites any COVID-related impacts that require us to shut down. We had, at one point in time, an issue which we could resolve relatively quickly in a catalyst site in Poland. But that also seems to be under control.

So, overall, on the supply chain side, absolutely right: There's a lot happening. But it seems to be under control.

On the semiconductor shortage, hitting the automotive industry in particular: What have we experienced there? We are working with the same estimates that the industry is working with. It probably has an impact in the order of magnitude of 1.5 to 2 million light vehicles in the first half of the year. The expectation is that that can be made up during the second half of the year.

In our business, we're tracking very, very closely which plants, automotive plants, are down for what period of time. We're seeing now that the Easter holidays have started a little earlier. They may last a little longer. At this point in time, there is no significant impact on our business. But here and there, we see that orders were canceled.

But this is still to a relatively small extent. We need to see how that situation develops, in particular now after the fire in the semiconductor plant in Japan. That comes on top of all of it.

**Dominik Frauendienst (Ayora Capital):** Given the developments in Q1 and the order book on hand for Q2, could you please provide us with updated thoughts on full-year guidance? You mentioned that the upper end is achievable. Is this still the case and is there a possibility for the upper end to be exceeded?

**Dr. Hans-Ulrich Engel:** Let me reiterate what we said at the end of February: We had a good January, we had a good February, which supported at the end of February to say “in that range,” which reflects the overall uncertainty that we have. In that range, we think that the upper end might be in reach, should the conditions that we experienced in the first seven weeks of the new year continue.

I think I can say that what we then saw in March is in line with the developments that we had in January and in February, which gives me the confidence to say that, during our earnings release for Q1, we’ll probably be able to give you a bit more specific guidance for the remainder of the year than on the basis of Q1’s figures.

**Christian Faitz (Kepler Cheuvreux):** On Agricultural Solutions, could you please briefly share with us how the northern hemisphere planting season has kicked off for your product offerings?

**Dr. Hans-Ulrich Engel:** It looks good. We had a good, strong start into the season already in early January. Planting is still a little difficult to say. It looks like there is a bit of a delay in Northwestern Europe due to the weather conditions. But if I look at what’s been bought so far, irrespective of whether that’s seed or whether that’s a crop protection product, that looks like a good start in total to the business in the northern hemisphere.

Let’s not forget about the following: Last year, we had some pre-buying happening in March as a result of nobody knowing what the pandemic would actually mean then for the month of April and going forward. So that’s something that we need to keep in mind when we look then finally at the figures for Q1 in Ag. And there’s something else that we need to keep in mind, which is the U.S. dollar, which at roughly 1.20, 1.21 on average so far this quarter is about 10 percent lower compared to the euro than it was last year. And that may have an effect also once we have the figures for the full quarter.

**Vincent Ijaouane (Pictet):** With the current issues in supply chain across the world – Suez, Texas or Gulf Coast – is the Verbund concept showing its strengths?

**Dr. Hans-Ulrich Engel:** I would say so. And there’s something else that’s showing its strengths, which is BASF’s basic philosophy to produce in the markets where our customers are. We already talked briefly about the new Verbund site in China. Irrespective of where we are, we want to produce where our customers are. We’ve never followed a concept where we build our upstream plants where cheap raw material is available. We build, also upstream plants, in the markets where our

customers are. In particular in situations like these supply chain distortions, in particular in global trade, I think that gives us a good, strong position.

Other than that, the Verbund in itself, also from the perspective of reducing CO<sub>2</sub> emissions, clearly gives you advantages because the transportation that you need to do you do primarily via pipeline and you don't have to transport your goods by ship, by truck, by railroad over many, many miles or kilometers.

**Gianmarco Migliavacca (Neuberger Berman):** Will your capex plan and possible M&A appetite affect your dividend policy and lead you to reconsider it? Or do you remain confident to be able to increase dividend every year?

**Dr. Hans-Ulrich Engel:** I think the importance of dividends we have emphasized for BASF with the proposal that we'll make to the AGM, which is to pay a dividend of €3.30 per share for the year 2020, the same as for the year 2019. And this after a year where you all have seen what happened, with the heavy impact that the pandemic had on our results. I think that clearly shows what BASF intends to do, also intends to do going forward. What we have in the capex plan for the years 2021 through 2025 is obviously reflected in what we do.

On the M&A side, and here in particular on acquisitions, I think we were also very clear, already with launching the new corporate strategy. At the end of 2018, we clearly said: We deemphasize acquisitions. There is much more focus on organic growth, with organic growth, in particular, from a geographic perspective, in Asia and with that in China. You are familiar with what we intend to do with the new Verbund site, but also with our battery materials business in which we invest with two new plants in Northwestern Europe.