1 BASF Group
1.1 Raw material supply (Gas and fuel oil)

Gunther Zechmann (Bernstein): To what extent do you expect that you have higher cost just from the mitigation measures that you are talking about? I am thinking of fuel oil, maybe externally sourcing ammonia. What does that do to your cost base? Where do you expect that certain value chains might not be economically viable?

Dr. Hans-Ulrich Engel: I’ll try to answer your gas price question, which is not an easy one because where we are substituting you are looking at situations where you are substituting against a gas price which is very, very high.

Look at yesterday’s spot price for North-Western Europe which hit the 200 euros mark per megawatt hour. It may actually be cheaper to use, as an example, heating oil to produce your steam than use very expensive natural gas. So it really depends case by case.

What we have done is: We have given you the increase in energy cost that we have overall, both for Q1 and for Q2. For the BASF Group, it adds up to a total of €2 billion in the first half. In a situation like this, I think that is the way to look at it and to compare BASF’s earnings, which are at or even above prior-year level.

Value chains potentially affected: Martin already mentioned ammonia in his part of the speech. We are also clearly looking at the acetylene and BDO value chains. These are value chains that are obviously under significant competitive pressure at current high gas prices. But, I think, we are taking the right measures there to cope with that.

Andrew Stott (UBS): In your speech on natural gas allocation you have picked out a 50% allocation and being able to run Ludwigshafen on a reduced rate. Is there a reason to take 50%? Is that a pre-agreed number with the German government for phase 3 or is that just a scenario?

On fuel oil replacement: There is an asterisk in your statement which says that this obviously assumes you can secure the fuel oil. Is that just a basic caveat or are there real potential problems in getting that fuel oil replacement?

I just want to make sure I read this right: Is it the case that you think you can displace 15% of your gas requirement at Ludwigshafen by fuel oil?

Dr. Martin Brudermüller: This 50% is actually an own BASF estimate. We have never shut down the site in 157 years. We have done all kinds of analyses and, you can imagine, with all these different users you can make hundreds and thousands of scenarios. So, if you consider on the one hand steam demand, which is something which you cannot buy outside, you might reduce power production because you can buy electricity from outside, but you cannot buy steam from outside. This is a significant part of running the site.

On the other hand, you mentioned the part from the raw materials side. Then you can already figure out that 50% is not such a wrong number. But that is not a number that was agreed with someone; it is our own rough estimate where it is about keeping the whole site running.

In the past, people said that you can run a steam cracker only at 40 to 45%. During the Lehman crisis, however, we have actually run it at much lower run rates. I would also not exclude that the BASF guys – ultimately, they learn every week – can also do better than this. But this is, I think, a rough guess which we have today.
Fuel replacement: You know that if you have burners that they are very much designed for the fuel; you cannot just switch from gas to liquid. Theoretically, some of the plants could. If we had a little bit more lead time and we had equipment to change burners, we could even increase the 15% of fuel oil here in Ludwigshafen; we are working on such ideas. But the question is: How fast could something like that be done. That is certainly nothing which will happen beyond what we already mentioned here at the site. But it could be a preparation even for next winter, which could still be subject to gas shortages. So, rest assured that we continuously improve to get less dependent on gas.

Regarding the fuel oil itself: We are talking about volumes here which we actually secured. We have also – I mentioned that in the speech – Schwarzheide, which is a smaller power plant e.g., which we can run 100% with fuel oil. We have fully secured the fuel oil there. I don’t think we talk here about volumes for BASF that would have a significant market impact.

Tony Jones (Redburn): On the gas shortage plan: If we assume that your 50% scenario plays out, can you give us a rough indication of the EBIT impact on an annualized basis? There’s a lot of moving parts, so any indication would be really appreciated.

Dr. Martin Brudermüller: We cannot give you any impact here because that depends on so many variables. First of all, what is the real level? You said 50%, which is the critical threshold. But then the question is how we react. What would be the power price from the grid? Do we get enough from there? If we buy ammonia, at what price? If we bring in BDO derivatives, maybe from our Chinese operations, into Ludwigshafen, what is the price and the transfer level here?

There are so many impacts that I think this would be a vague number. It is a rather big range you can theoretically think about. And I would not engage now to mention just one number. I hope for your understanding.

Chetan Udeshi (JP Morgan): I was just curious in terms of understanding what was the reasoning for not assuming any production cuts in Europe in the remainder of the year, especially given that the European Commission came out with a clear guidance that all member states have to reduce gas consumption by 15% on average?

It feels for us externally that BASF is not yet in a crisis mode to manage this situation. Is that a fair assessment? Or have you thought about how you are going to deal with this situation, not just in terms of technical production metrics, but more in a strategic, commercial framework?

I was also looking at your comments about substituting some of the production from Europe to the rest of the world. But I didn’t see any mention of maybe trying to optimize the pricing etc. to manage that situation. So, I’m just trying to understand how the company is thinking about the whole situation overall.

Dr. Martin Brudermüller: I don’t know why you think we are not in a crisis mode. We are in a crisis mode, but not in a panic mode. I think this is important. For the team, as I mentioned, this is a moment of pride because they are really good in managing such situations. And, you know, there were several situations in the past where the team got the maximum out of it.
We have calculated hundreds of scenarios how to do certain things and to reduce that and to import here. I think that comes together. On the other hand, what is happening externally? Look at the share of Russian gas in Germany, which has come down from 50% to now lower than 35%, and then also at the end of the year the first LNG terminals, the FSRUs in Germany, are kicking in. You most probably read this morning that France now announced to deliver gas to Germany. Germany then restarts coal-fired power plants, and is now even considering further reductions by running nuclear power plants for longer in addition to reducing consumption.

So if you take all that, including the storage level and maybe assume that deliveries from Russia go up a little bit, we are in a scenario that even this winter we could cover gas demand in Germany and Europe if it’s not a particularly cold winter, if it’s a normal winter.

Taking all of that together – in a scenario where we reduce our share from 100% to 50% – that’s around 2% of German gas usage – we are confident that in such basic scenario we get through without a major interruption.

I would say, we are engaged on all levels and fully prepared for all kinds of scenarios. We are optimistic that we can get through this. You also mentioned the activation of our global grid, our global capacities, then fully utilizing capacities in other regions to support European customers.

We are in crisis mode, but we are not panicking, and this is why we have presented these assumptions for the second half.

Georgina Fraser (Goldman Sachs): To leverage your insights on the German government’s crisis management plan: If the gas continues to flow at the rate we have just now, 20%, at what point does the government trigger phase 3?

Dr. Hans-Ulrich Engel: Answering this would be pure speculation. If you look at what the German government has done so far for phase 1 and also for phase 2 compared to what has happened in other countries such as Italy and Austria, Germany was not a frontrunner. And I’d say, based on everything that we’ve experienced so far, the German government is carefully analyzing the situation and then making the right calls at the right point in time.

So, let’s see what’s going to happen with gas flows over the next weeks. I’ll give my very personal opinion: I don’t expect anything to happen with respect to triggering phase 3 prior to the end of September, early October. But that’s a personal guess and we’ll see what happens.
1.2 Financial metrics (Net debt, working capital and cashflow)

Mubasher Chaudhry (Citi): The net debt has moved up a little bit. And given your forecast of quite a weak second half, do you feel comfortable around continuing with the buyback at this pace or is there a potential to be slowing it down a little bit? Just some thoughts around the capital framework would be helpful.

Dr. Hans-Ulrich Engel: Yes, it has moved up. It is not out of the ordinary that net debt moves up after Q2, in which, among other things, we pay the dividend. At €19.5 billion, it stays within the range that we’ve seen between, say, 2019 and 2022. So, also there, nothing out of the ordinary.

On the buyback program, we have progressed. You may have seen what we showed on the website at the beginning of this week. We’ve bought back in the meantime a bit more than 20 million shares for roughly €1 billion. And it is our full intent to continue with the program as announced.

Tony Jones (Redburn): We’ve seen high input costs and maybe procurement has been stock-building on some critical inputs now ahead of a shortage. Should we therefore expecting working capital to still be a negative in the second half?

Dr. Hans-Ulrich Engel: No, we do not expect to increase net working capital. On the contrary, we expect that net working capital will decrease. Leaving gas aside, if you look at raw material price developments over the last months, they seem to have peaked now in Q2. So, we don’t expect much in terms of further increases there.

If you think about BASF’s business profile in the second half of the year, lower sales – the rough split there is 60% in the first half of the year, 40% in the second half of the year – we will bring inventory down. So as a result of all of that, the expectation is that there will be cash releases from net working capital.

Peter Clark (Société Générale): You seem pretty comfortable with the cash flow. I accept there are also the inflationary effects that work through. But you have got the capex significantly rising into this. Are you still on for the €25.6 billion five-year plan? I think €6 billion was next year because, clearly, China is going ahead.

At what level of net debt to EBITDA would you start to get worried? Because I have over 2 next year, but I’m a bit more bearish than you, I think.

Dr. Hans-Ulrich Engel: On cash flow, I think, for the second half, I already addressed what our expectation is. We have not made any changes to our five-year capex plan. We are now in the new budgeting and planning phase.

But my point of view at this point in time is that we will not see too much change there. Currently, we’re sitting at a leverage ratio, which I think, with a balance sheet like BASF has, with the kind of EBITDA and cash flow that we generate, that you and I should not be worried about.
1.3 Europe and Ludwigshafen Verbund site

**Georgina Fraser (Goldman Sachs):** Related to the competitive pressures in certain value chains. Do you see today already the basis for a structural shift of chemical production to be relocated outside of Europe on the back of this energy crisis? And would that impact the chemical industry’s ability to decarbonize?

**Dr. Martin Brudermüller:** I think it’s too early now to make all these calculations. But there is no doubt that we have a competitiveness issue in Europe far beyond the chemical industry. We will have structurally higher energy costs because one contributor to the wealth and also the growth in Europe was cheap Russian gas. If this is now LNG-based: You know that there is a 5 to 6 US$/mmBtu adder for gasification, transport and regasification. That will structurally bring the costs up.

How long-term prices will change and how much LNG comes in, this is, too early to say, but that certainly has to trigger some thoughts about long-term competitiveness and further capacity growth. You might run out capacities but not build new ones. It also strongly depends on the integration. You know that we also add a lot of margin by using these raw materials in the value chain. So, there’s a whole lot of considerations going into this.

Europe has to think about its long-term competitiveness when it comes to energy prices far beyond the chemical industry. I think that can actually burden the decarbonization plans. I am not talking now for BASF, but for the chemical industry as a whole. A lot of investments need to be done to decarbonize. If the margins get smaller, the earnings get smaller, and this might then have an effect on the speed and the capability to invest in decarbonization. But it’s a little bit too early to judge.

**Christian Faitz (Kepler Cheuvreux):** What is your current scenario on the Rhine River levels and potential curtailments in this year of exceptional drought in Western Europe, which could easily top the 2018 situation?

**Dr. Martin Brudermüller:** Since the impact we had in 2018, we have taken a lot of measures and studied mitigation measures, also, regarding our infrastructure.

First of all – I think this is very important – we installed an early warning forecast system which gives us a lead of six weeks at least to know what is coming. That also gives us time to prepare in terms of logistic measures and increasing inventory.

The second part is – that was the other effect from logistics – the cooling water situation where there is an upper limit on the temperature of water that can be returned to the river. We have changed the setup and have invested in infrastructure so that we have closed cooling loops with air cooling which makes us much less vulnerable to the temperature level of the river.

We have also engaged in building a ship, which I have to admit is not yet operating. But we have also leased several ships that have a relatively low depth and can operate at much lower Rhine levels. And we also have partially reshuffled logistics from ships to other modes of transport.

As a result of all that, we are not worried at the moment that we enter a similar situation. What is then beyond the six and eight weeks I cannot forecast. But I would say, we are much better prepared in terms of such an impact than in 2018, and it is not really a worry at the moment.
**Mubasher Chaudhry (Citi):** Regarding the Ludwigshafen flexibility: Can you give us a feel of how quickly the utilization can be brought up and down? Is that something that can happen within days, or does it require a longer-term planning in terms of being able to bring down the utilization and, if and when the situation improves, being able to take it back up?

**Dr. Martin Brudermüller:** We have never actually shut down the Ludwigshafen site, but we certainly know where the critical assets are. Usually, if there is no more gas supply, you have the pressure on the pipelines for maybe about six to eight hours. Then it falls to a certain threshold where then also safety measures have to kick in to protect the plants. That’s about the time you can drive down the facilities. For most of the plants, this is totally uncritical. You have some plants that are at a high temperature level. If you cool them down too fast, you may destroy the reactor because you get cracks and other issues. We know which these facilities are. If we saw that coming, we would start first with those. Overall, I think, the response time we have is hard work for the team, but we can manage that.

**1.4 China and Zhanjiang Verbund site**

**Gunther Zechmann (Bernstein):** You put China chemical production at 3.1% in Q2. Your China volumes were down over 17%. Why is it that BASF is so much more affected by lockdowns than the industry? Or are there any other factors that would contribute to that delta?

**Dr. Martin Brudermüller:** I do not have the split for everything, but the lockdown in the automotive industry was the main impact here. You know that’s 20% of our global sales. In China, the share is even a little bit higher from the portfolio. That was basically the reason why we had this steep decline. But, as we also said, in May and June, business recovered again sharply.

**Laurent Favre (Exane BNP Paribas):** On Zhanjiang, I think when we did a deep dive back in September, you had highlighted €8 to €10 billion of capex. And since then, we’ve had inflation everywhere and the euro has gone down by more than 10%. So, I was wondering what is the latest on capex budget for Zhanjiang? And then related to that: In the current market environment in China, what would be the EBITDA contribution of the assets fully ramped up?

**Dr. Martin Brudermüller:** I talk about the first part. Indeed, it’s on the upper end of what you mentioned, but the important part is that the team reduced the investment sum in RMB terms. So it is basically a reporting issue because of the exchange rate between the euro and the RMB.

**Laurent Favre (Exane BNP Paribas):** So not more than €10 billion then?

**Dr. Martin Brudermüller:** Yes.

**Dr. Hans-Ulrich Engel:** Your second question was on earnings potential, fully ramped up. No change there. We’re still working with a bit more than a billion in EBITDA for the year 2030.
**Robert Hales (Morningstar):** I have a long-term question on the China Verbund: Assuming it takes 8 to 10 years for it to be fully built, all the plants there. But the benefit of the Verbund is integration. Does that mean that, up until that point, you’ll be a relatively high-cost producer for the plants that are operating in the first phases?

**Dr. Martin Brudermüller:** The Verbund certainly has, in the first step, a high infrastructure component. That is always the burden when you do this. Then you have the other phases, which are actually very economic, because you don’t have that part anymore and you can benefit from utilization and infrastructure.

This is also why the Verbund is always a long-term concept. We currently talk about phase 1 and 2 and the next generations might talk about 3, 4, 5 because there is a lot of ground left. A further expansion of the area is also possible. We have the clear intention to make that a location for future investments in China.

I would say, the further down you go and the bigger you scale, the larger the benefit you receive. Taking the big infrastructure part into consideration now, we are confident that even in the first phase our contribution is already a very strong one to the BASF Group. Given the growth perspective, that is a fantastic opportunity for BASF Group.

**Dr. Hans-Ulrich Engel:** Maybe to add to this: It will definitely not take 8 to 10 years to fill phase 1 and what may be decided as phase 2 of this new Verbund site. This will be much, much faster.

1.5 Wintershall Dea

**Matthew Yates (Bank of America):** BASF obviously chose to invest its capital many years ago into oil and gas access because it was intended to create somewhat of a portfolio hedge for you, which in the current energy price environment is very beneficial.

However, the decisions you have made over the last few years around the structure and the governance of this asset mean that BASF shareholders are currently not really seeing any cash benefit from owning these assets, irrespective of the half a billion euros of profit booked on the P&L.

Can you update us on your thinking for monetizing this business either through a disposal or the prospect of receiving some meaningful cash dividends at some point in the coming quarters?

**Dr. Hans-Ulrich Engel:** What are the current cash flows from Wintershall Dea? You rightly pointed this out: This is by way of dividend. We received the dividend on the preferred shares in the second quarter. We are expecting a dividend payment also then on the common shares in the second half of the year.

As you know, we have made a strategic decision to exit this business via an IPO which didn’t work in 2020 and didn’t work in 2021, for obvious reasons. Currently, it is also not working. We are looking at ways to monetize, as you can imagine. We will speak about this when the time comes. But, I think, first of all and importantly to say, BASF’s cash flow is supported at this point in time through the dividend payments that are coming out of Wintershall Dea.

**Matthew Yates (Bank of America):** Can you elaborate a little bit on what the exact dividend policy of Wintershall Dea is? Obviously, in recent history, the company had quite a high debt burden, but that's rapidly coming down. So, what are the criteria for the timing and size of any dividend over the coming quarters?
Dr. Hans-Ulrich Engel: I can’t give you the details. The shareholders will decide on the dividend. Obviously, the cash position of the company and the liquidity that the company has, on which it reported yesterday, as you have seen, will play an important role in making that decision during the second half of the year.

Sebastian Bray (Berenberg): How messy could the exit process from Wintershall get? What I mean by this is: My guess is that LetterOne has some type of veto rights that are making it more difficult than BASF would have liked to extract cash from that business. Do the articles governing the control of the company have scope for arbitration if LetterOne digs in its heels and how long could this process take?

Dr. Hans-Ulrich Engel: I don’t think that this will get messy. Expect the shareholders to have agreed on certain exit rights to kick in at certain points in time. I’d say what has been agreed upon is within the frame that one would call an ordinary and usual or customary framework. That’s why I do not expect an exit to get messy.

1.6 Outlook 2022

Markus Mayer (Baader): Have I understood it correctly that you are still confident to reach the upper end of your EBIT guidance range? The potential production cuts in BDO, ammonia and acetylene, is it already included in the guidance, in the lower end, I guess, or is this still outside of the guidance? The cost reduction measures that you mentioned, have they already been included in the guidance?

Dr. Martin Brudermüller: This is all in all a realistic picture. Yes, we think we can reach the upper level. That is seen right by you. What we described is a kind of a soft landing towards the year end. So not a sharp decline, but softening from the demand side. That means supply/demand is softening. But that also means that pricing power is softening. This all turns weaker basically.

The idea is that the demand softening and the weakening of the margins is counteracted by some of the cost reductions. This is partially postponement, which I also think is logical once you are in a softer environment. But it then might also come to the point that we also structurally consider cutting some of the costs and really go to a lower overall cost basis.

So that certainly includes our assumptions what kind of products we might reduce and we might buy in. Ammonia, you mentioned, is actually the biggest single product here. I think you should take that as a positive sign of confidence from our side.

Jaideep Pandya (OnField Research): Your CO₂ guidance for the year is, roughly speaking, about a million tons lower. What is the background for this, please? Is it just ammonia reduction or is there more to it, given that you are increasing your fuel oil consumption? So I would assume your fundamental scope is increasing, but you’re still guiding for a lower CO₂.

Dr. Martin Brudermüller: I think with the CO₂ it’s a little bit of everything that you mentioned. First of all, you see that this is not a year with a very strong volume effect. Secondly, we would then indeed shift: If we buy in ammonia and shut down own production, we shift from Scope 1 to Scope 3, which is also clear.
But on the other hand, we have also shown you a plan at the Capital Markets Day that we actually reduce both by OpEx measures and by increasing the amount of green electricity, and all that together actually gives this effect. And we are in July already; more than half of the year is already gone. So it is now about the next five months.

**Charlie Webb (Morgan Stanley):** On this kind of normalization you are expecting in the second half: Can you allude to kind of the upstream normalization you’ve seen might unfold? In which chains are you seeing some softening? And how have the discussions with customers around pricing evolved in the first half of the year, looking into the second half of the year? Do you get any sense that those customers are destocking, are trying to turn the price momentum the other way? How should we think about that with the lingering inflation that’s around?

**Dr. Hans-Ulrich Engel:** We’ve seen normalization in a number of products, starting in particular in North America with cracker products, where prices and margins have come down quite a bit. The same is true for cracker margins in Asia. We’ve seen this also during the course of Q2 and also going into Q3 in the acrylics value chain, in particular with respect to acrylic acid. We’ve seen it with respect to BDO.

But frankly this is not a big surprise. If you think back to the guidance that we gave at the beginning of the year, we clearly addressed it. We clearly said that we are expecting margins to come down from the very high levels that we had in 2021 in the upstream business. I should also have mentioned that we see MDI becoming weaker in Asia and in particular in China. So we see actually now what we had already addressed earlier in the year. That was the question on normalization.

Pricing: Look at what we’ve done in the first half of the year, look at what we’ve done across the businesses in Q2 in particular. Considering the high raw materials and the high energy prices, we will have to continue. Does this make customers happy? No, it does not. Do customers in the end understand? Yes, they do. Has it become more difficult during the course of the year? Yes, it has.
2 Segments

2.1 Chemicals

– no specific questions –

2.2 Materials

Jaideep Pandya (On Field Research): There’s a significant divergence in chemical prices in China versus Europe and the U.S. If we stick to ammonia, just for an example, what is the cost disadvantage right now on an overall basis for producing this in China versus Europe and the U.S.? I just want to understand: Is there a scenario where you’re going to produce much more in your Chinese assets and ship rather than produce in your European assets?

Dr. Hans-Ulrich Engel: I don’t have the necessary details for answering your question, but what I can tell you is that ammonia prices at this point in time in Asia and in North America are pretty much at the same level, slightly below 1,000 U.S. dollars per metric ton, a little bit higher currently in Europe, for obvious reasons. That’s the difference in gas costs there.

We don’t produce any ammonia in China, so there’s no way to bring it out of our own system. But we are producing in a world-scale plant, in a joint venture together with Yara, in Freeport. And when you look at natural gas prices in the U.S., which have also increased and are currently at 8 to 9 dollars per mmBtu, you can imagine that there is a big advantage for a U.S. ammonia producer. We are certainly tapping into the potential that we have there.

2.3 Industrial Solutions

– no specific questions –
2.4 Surface Technologies

**Andreas Heine (Stifel):** Can you give an update where you stand with the carve-out process of the automotive catalysts and how you intend this to continue?

**Dr. Hans-Ulrich Engel:** This is perfectly in line with what we had planned. We are progressing with the respective carve-out measures and should be done with the carve-out some time early in the second half of 2023.

2.5 Nutrition & Care

**Sebastian Bray (Berenberg):** What is the sales value on an annualized basis of a business under strategic review in Nutrition & Care?

**Dr. Hans-Ulrich Engel:** Your question relates to our Illertissen business: We have disclosed the employees, 330, but this is not what Sebastian is interested in. He would like to know what the earnings potential of that business is. We haven’t disclosed that and, as we said, we’re looking into strategic options there.

2.6 Agricultural Solutions

**Christian Faitz (Kepler Cheuvreux):** You talk about lower volumes in Europe. Is this weather-related, i.e., less fungus and insect pressure and, hence, sales channels being full? At the same time, you have a strong increase in overall fungicide sales. That would suggest significant growth outside of Europe. Would that be a correct observation?

**Dr. Hans-Ulrich Engel:** Indeed, the weather is affecting business in Europe a bit. The drought conditions here had an impact on the application of crop protection products. But you have seen the results of the quarter overall, which is very strong, in particular also due to the pricing initiatives that we have driven across the portfolio, fungicides, as you mentioned, being a very strong business, in particular outside of Europe.

With respect to the channels, based on latest information that I have, we currently have a situation in Europe which I would describe as normal and a situation in North America which I would describe as channel inventories being at the lower end of what we see under normal circumstances.