

28-Jan-2022

# Celanese Corp. (CE)

Q4 2021 Earnings Call

## CORPORATE PARTICIPANTS

**Brandon Ayache**

*Vice President-Investor Relations, Celanese Corp.*

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

---

## OTHER PARTICIPANTS

**John Roberts**

*Analyst, UBS Securities LLC*

**Jeffrey J. Zekauskas**

*Analyst, JPMorgan Securities LLC*

**Duffy Fischer**

*Analyst, Barclays Capital, Inc.*

**Michael Sison**

*Analyst, Wells Fargo Securities LLC*

**Ghansham Panjabi**

*Analyst, Robert W. Baird & Co., Inc.*

**Kevin W. McCarthy**

*Analyst, Vertical Research Partners LLC*

**Vincent Stephen Andrews**

*Analyst, Morgan Stanley & Co. LLC*

**P.J. Juvekar**

*Analyst, Citigroup Global Markets, Inc.*

**David Begleiter**

*Analyst, Deutsche Bank Securities, Inc.*

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*

**John McNulty**

*Analyst, BMO Capital Markets Corp.*

**Matthew Blair**

*Analyst, Tudor, Pickering, Holt & Co. Securities, Inc.*

**Arun Viswanathan**

*Analyst, RBC Capital Markets LLC*

**Aleksey Yefremov**

*Analyst, KeyBanc Capital Markets, Inc.*

**Kieseane Riddick**

*Analyst, Evercore ISI*

**Jaideep Pandya**

*Analyst, On Field Investment Research LLP*

## MANAGEMENT DISCUSSION SECTION

**Operator:** Greetings. Welcome to Celanese's Fourth Quarter 2021 Earnings Call and Webcast. At this time, all participants are in a listen-only mode. A question-and-answer session will follow the formal presentation. [Operator Instructions] Please note this conference is being recorded.

At this time, I'll now turn the conference over to Brandon Ayache, Vice President-Investor Relations. Brandon, you may now begin.

---

### Brandon Ayache

*Vice President-Investor Relations, Celanese Corp.*

Thank you, Rob. Welcome to the Celanese Corporation fourth quarter 2021 earnings conference call. My name is Brandon Ayache, Vice President of Investor Relations, and with me today on the call are Lori Ryerkerk, Chairman of the Board and Chief Executive Officer; and Scott Richardson, Chief Financial Officer.

Celanese Corporation distributed its fourth quarter earnings release via Business Wire and posted prepared comments about the quarter on our Investor Relations website yesterday afternoon. As a reminder, we will discuss non-GAAP financial measures today. You can find definitions of these measures as well as reconciliations to the comparable GAAP measures on our website.

Today's presentation will also include forward-looking statements. Please review the cautionary language regarding forward-looking statements which can be found at the end of the press release as well as the prepared comments. Form 8-K reports containing all these materials have also been submitted to the SEC. Because we published our remarks yesterday, we'll go ahead and open the line for questions.

Rob, please go ahead and open the line.

## QUESTION AND ANSWER SECTION

**Operator:** Thank you. At this time, we'll now be conducting a question-and-answer session. [Operator Instructions] Thank you. And our first question comes from the line of John Roberts with UBS. Please proceed with your questions.

**John Roberts**

*Analyst, UBS Securities LLC*

Q

Thank you. You mentioned you're not expecting another shutdown at Nanjing or any disruptions from the Olympics. Do you think China can get from a zero COVID strategy to an endemic COVID environment like the US and Europe without a lot more disruptions?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

That's an interesting question, John. We're really not – we said we weren't expecting any disruptions that was really around energy curtailments or things like we saw in the October timeframe. Also with Chinese New Year's in Beijing a little bit differently than we've seen prior to 2020, we're not seeing as many total shutdowns during that period as China worries about their economy and wants to see recovery. So we've modeled in only mild seasonality across our businesses for Chinese New Year's and for the Olympics.

The COVID question is an interesting one. I'd say COVID seems well under control in China, at least from officially reported but we would also say our experience in our plants, in our offices, this COVID is under control. And I think you've seen some recent comments by the Chinese government where they are starting to back away from their zero COVID strategy and more towards managing an endemic.

So, I do believe – I think the outcome of all of what I've just said is – my personal belief is that we will see a fairly smooth transition in China as they go, as is much of the rest of the world towards more of managing as endemic versus sticking with their zero COVID policy.

**John Roberts**

*Analyst, UBS Securities LLC*

Q

Okay. And could you talk a little bit about the M&A outlook? Santoprene appears off to a good start, and – but what are the areas of Celanese that you're most interested in expanding? Is it another polymer like Santoprene or is it maybe something in Asia after the Polyplastics transaction or maybe something in chemicals like the redispersible polymers deal you did?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. So – look, Santoprene, we are really excited about Santoprene. The transition went really well over December. Even just one month in, we're already starting to see delivery up from synergies that are ahead of schedule. We're excited about what we see from the products and where we see the possibilities for cross-selling as well as new applications for Santoprene. And of course we're really excited about not just the assets we acquired but the people we acquired and the great job that they've done really coming into Celanese and becoming part of the Celanese family. So, you're right. Santoprene we think has been a great success so far and

we anticipate it just gets better from here and makes us excited about a future M&A as well and our ability to continue to do larger and larger M&A.

In answer to your question about what type of M&A, I would say yes we are looking at everything that you mentioned. We're looking at additional polymers, different additional geographies. We are looking at acquisitions across both Engineered Materials and the Acetyl Chain. So I would say our lens is still fairly wide open in terms of the types of M&A that we would consider and in terms of size; all the way from bolt-on to transformational.

So we think it's quite an exciting time for us for M&A. Not only do we still have the financial capability to do a significant amount of M&A but we also believe we have the management and employee bandwidth and capability. And again especially with some of the acquisitions we've done with Elotex and Santoprene, bringing in even more talent to take on additional M&A going forward.

**John Roberts**

*Analyst, UBS Securities LLC*

Q

Thank you.

**Operator:** Our next question comes from the line of Jeff Zekauskas with JPMorgan. Please proceed with your questions.

**Jeffrey J. Zekauskas**

*Analyst, JPMorgan Securities LLC*

Q

Thanks very much. In your script describing M&A, you said that you were considering a wide range of opportunities within your desired investment-grade rating. Does that indicate that your acquisition aspirations are more modest rather than transformative?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

I wouldn't make that assumption, Jeff. If you look at our actual financial capability, if you look at by cash, the free cash flow we had this year at \$1.3 billion; next year, we'll be at \$1.4 billion. If you look at our cash flow, we actually think we have a very large capacity to take on debt. We're very low levered right now. We can take on significant debt and we could take on, with the cash flow we have, we could pay off that debt. So I wouldn't say that these are – our ambitions are modest. I'd say actually we're in the best time in our history to actually take on any range of M&A and still do it within our investment-grade rating.

**Jeffrey J. Zekauskas**

*Analyst, JPMorgan Securities LLC*

Q

Okay. Great. Thank you very much.

**Operator:** Our next question comes from the line of Duffy Fischer with Barclays. Please proceed with your questions.

**Duffy Fischer**

*Analyst, Barclays Capital, Inc.*

Q

Yes. Good morning. First question, just on the Acetyl Chain, when you look at the different steps from acetic acid down to VAM and some of the other derivatives, where do you see the supply demand being the tightest over the

next couple of years and where do you think either you or the industry might make some announcements around new capacity in that chain over the next couple of years?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

I would say the entirety of the chain is pretty tight right now. Just look at utilizations. Acetic acid had been pretty close to 100%. Now, that did moderate a little bit in the fourth quarter but still 85% to 90% utilization in acetic acid. We see that being about the same this quarter and maybe tightening a little bit as we go through the year.

But we do have some new capacity coming on sometime in the next few months with the second phase of [indiscernible] (00:08:16). VAM is very tight. I would say VAM has been around 100% utilization for some time now. It was a little bit better in the fourth quarter. But again in the first quarter we see it being really tight again as we have some outages, especially in China for turnarounds as well as the maintenance downtime. So I think VAM is going to continue to be very tight. We've announced some expansions in VAM. There's been a few other ones but I think the demand in VAM continues to grow quite rapidly.

And then if you go into our downstream products like emulsions and RDP, I would say the demand is huge right now. There are some really interesting things happening in the market now around increased energy efficiency requirements and we make some systems that are made of – think about kind of five layers of emulsions and RDP powders to make thermal insulation systems for putting on the externals of buildings. And so, especially in Europe, we're just seeing a demand, quite frankly, that the industry can't keep up with right now. So I'd say those utilization rates are definitely at 100% and staying that way.

So I do think we'll see some expansion. I think as we've called out before, acetic acid, any major expansions will take a while. We're at least four to five years out from any other expansions there other than our old Clear Lake capacity that will come on first-half of 2022 – 2023, sorry. I get the wrong year, 2023, and I think we called out some VAM expansions. We've called out some VAE expansions we're making. We are looking to expand RDP as well and I suspect we'll see others in the industry doing so. But I will say it's still into a very tight market and I think this is the market – these are markets that will all continue to be very tight for the next, I'm going to say, at least four to five years.

**Duffy Fischer**

*Analyst, Barclays Capital, Inc.*

(

Great. Thanks. And then maybe as a follow-up, since you get at acetic acid from kind of all three of the carbon starting points, can you talk about what's happening to the cost curve for acetic acid. With all the different energy price moves we've seen in the last half year, what will 2022 look like different than 2021 from a cost curve standpoint?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

I think if you look at the last year, we've seen everything go up. I mean natural gas has gone up including in the Gulf Coast of the US. Coal has gone up in China. Oil has clearly gone up. And so although everything has gone up and with that we see methanol prices going up, I would also say it hasn't changed the relative order of attractiveness.

US Gulf Coast natural gas even at \$6 a million BTU as we saw during times in the fourth quarter is still the most attractive source of raw materials for acetic acid. Coal, oil kind of stay almost in parity and it goes back and forth.

But I'd say they're about the same usually, and – but still significantly more expensive than acetic acid. So, I don't really see the priority. I mean Gulf Coast production remains the priority, followed by the Nanjing and Singapore for us. And I don't really see that changing. And I think what that means is even with higher natural gas prices, because the marginal capacity in acetic acid is coming out of China which is coal price, you'll continue to see prices that support good margins in the Acetyl Chain as we go forward over the next few years.

---

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

A

Yeah. Definitely. The only thing to add is I think what has changed from a relative basis is freight and logistics costs. And with our network of having the three assets that just gives us ability to really be well-positioned to meet customer needs around the world. So while the cost for others has moved up, we only have one plant, our network just gives us a nice advantage there to take advantage of the fact that those logistics costs have moved out pretty rapidly.

---

**Duffy Fischer**

*Analyst, Barclays Capital, Inc.*

Q

Great. Thank you, guys.

---

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Thank you.

---

**Operator:** Our next question is from the line of Bob Koort with Goldman Sachs. Please proceed with your questions.

Q

Hey. Good morning, Lori. This is actually [ph] Mike (00:12:47) sitting in for Bob this morning. And I was wondering in your prepared comments you kind of talked about an expectation of acetyl industry pricing moderating in the first quarter. I'm just wondering if you could give us perhaps maybe a bit more color around the magnitude of moderation you may be baking into your guide?

---

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Sure. Look, we call out moderation in the first quarter and really throughout the remainder of this year, really assuming we don't see the amount of supply disruption that we had in this year. I mean this year between the freeze, some large turnarounds in the US in particular, then the curtailment in China in October, we had quite a lot of disruption in the supply chain for acetic acid. And with that it tends to keep prices higher with the uncertainty that's out there on top of what's been very robust demand for acetic acid and Acetyl Chain products this year.

So as we go into 2022 and we saw it in the fourth quarter, we saw, after the peak in October was driven by the curtailments in China and it's kind of more of the perception of the curtailments in China we saw a very rapid moderation through November and December. And we expect that. First quarter is actually probably kind of flattish with where we ended the year but then we do expect further curtailment as we go through the rest of the year, assuming no big supply disruptions. Obviously, if we get into a period where we have major supply

disruptions, we could see some price support again for higher acetic acid prices. But that is the basis for our assumptions this year.

Q

Okay. Thanks. And then just as a quick follow-up, if memory serves me, there typically is like a seasonal I guess rebound in pricing in kind of that second, third quarter. Do you anticipate that or do you see the moderation continuing through what has historically been a seasonal rebound?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

What I would say, [ph] Mike (00:14:51), is usually we see a seasonal softening around Chinese New Year as production – as consumers are shut down in China during that period of time and a lot of factories shut down for a couple of weeks, so folks [ph] could get a vacation (00:15:08). We're really – we're not putting much of that in our forecast for first quarter because we have a minor amount of seasonality that we put in first quarter. So as a result of not seeing much seasonality in first quarter, I wouldn't expect much rebound in second quarter and third quarter just because we've not baked in much of a dip in the first quarter.

Q

Okay. Thanks a lot.

**Operator:** Thank you. Our next question comes from the line of Mike Sison with Wells Fargo. Please proceed with your questions.

**Michael Sison**

*Analyst, Wells Fargo Securities LLC*

Q

Hey. Good morning. Lori, just curious in the third quarter prepared remarks, you talked about 2023 and I know 2023 is more of a guideline versus specific guidance at this point but do you still feel good about sort of that \$15 in 2023 and growth beyond that?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

We do, Mike. We've called out greater than \$15 EPS this year. And for those of you who've done the math, you probably realize that our numbers, if you add them up, comes a little bit closer to \$16, if you look at the call – what we've called out for individual businesses. Look, we're just trying to be prudent with the \$15. We're feeling good about 2022 and what we see there.

If conditions continue to exist and we start seeing improvement in supply chain and some of those things obviously our number could move well above \$15 for 2022. And therefore even with more moderation in Acetyls in 2023, offset by growth in Engineered Materials in 2023, we feel really good at that greater than \$15 number for 2023 and for the years beyond.

**Michael Sison**

*Analyst, Wells Fargo Securities LLC*

Q



Got it. And then I guess for EM, you're looking for another – for a good year in organic volume growth again. Any changes to your sort of view on auto? I think it did come in a little bit better as you noted in the fourth quarter and how does that affect your outlook for – or how is that embedded in your outlook for 2022?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. Great question. Really, for automotive, I would say Q4 didn't come back as strongly in automotive as most of the tiers and other people predicted. It did come back a little bit in Q4 but not nearly to the extent we expected. I mean if you just look at Q4 of this year, it's still well below Q4 of 2020. So there's still a lot of recovery to come in auto.

Now, we are not, in our modeling, we're not projecting as much recovery in auto as maybe IHS is. So if IHS is right, which we hope they are, that will be additional upside for us. We're assuming actually auto volumes are pretty flat in 2022 versus 2021. Now, we continue to increase content into autos so our sales in auto continued to go up. But we are projecting fairly flat total auto builds. But again that leaves us upside if we do see autos coming back more strongly like IHS is predicting.

**Michael Sison**

*Analyst, Wells Fargo Securities LLC*

(

Got it. Thank you.

**Operator:** The next question comes from the line of Ghansham Panjabi with Baird. Please proceed with your question.

**Ghansham Panjabi**

*Analyst, Robert W. Baird & Co., Inc.*

Q

Thank you and hello, everyone. Lori, maybe just picking up on the comments on China, as you sort of think about 4Q and the acetic acid and VAM pricing fade that you referenced in your prepared comments in the region, is that just – I mean realizing there's a lot going on, is that just a function of the economy having slowed in China with real estate, et cetera and that continues into the first quarter and then just your view in terms of the recent stimulus measures that have been announced in the country. How do you see that sort of playing forward for Celanese beyond the first quarter? You're given very specific guidance for 1Q but just on the Acetyl Chain, beyond that would be helpful as well.

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. If we go back to fourth quarter, it was really an interesting phenomena. If you look in October we saw coal prices run up due to some geopolitical things that were going on. With that, we saw methanol pricing run up. And with that – and then we had the curtailments being announced in China. And I think there was a huge concern that acetic acid plant, VAM plants were going to shut down. And so we saw price shoot up to \$1,300 per metric ton. That was a very short impact though; kind of a one-week phenomenon. And then when people realized not much acetic acid was being shut down, we saw acetic acid prices come down back to that \$850 and then even into the \$750 range as we moved into the end of the year. Now that's still good pricing for acetic acid.

We haven't really seen much softening in demand in China. So, despite the things we read about the economy, the construction slowdown, we haven't seen much softening in demand in China. And that's why we're saying really for first quarter we think we're probably going to be fairly steady at about that same range of level that we saw at the end of the fourth quarter.

And I think as we go through the rest of the year, we're calling out moderation and again we're just calling that out on assuming supply stabilizes throughout the world and supply chain and demand remains fairly steady. And that really is our outlook for China to your further question. Even at slower economic growth, a lot of that is coming in high-tech, it's coming in more social media platforms and things like that that China is intentionally wanting to shut down.

We're seeing China clamped down a little bit on real estate and some of the speculative stuff that was going on in China but we're not seeing much impact on industrial. We're not seeing much impact on consumer demand and we're not seeing much impact even on a lot of the construction segments that we're in; like people redoing buildings and adding insulation and all those sorts of things. So our outlook is still pretty robust for China throughout the entirety of the year in 2022.

---

**Ghansham Panjabi**

*Analyst, Robert W. Baird & Co., Inc.*

Q

Okay. Very helpful. Thanks. And then on the EM margins, down somewhere between 500 and 600 basis points below 2018 and – sorry, yeah, 2018 and 2019 levels. I know the mix has changed a bit but is the prior high watermark still realistic sort of pro forma for the acquisitions including Santoprene?

---

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. I would say, look, our expectations for acquisitions is the same just given the nature of the business. When we got Santoprene, they came in with a little bit lower margins. But we're very confident that as we work through the year, as we see recovery in auto, as we have the chance to take commercial actions around pricing and other things with Santoprene that we'll be able to get them up to the expectations we have for the rest of our business. And that would be our expectations for any other acquisitions that we look at; that we get back to similar levels of margin.

---

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

A

Yeah. And I think Ghansham with what we saw from a run-up in energy costs probably across the EM portfolio, we knew it was going to take some time. And as we called out in the prepared remarks, we do expect to get ahead of that here by the end of the first quarter. And then you should see margins improve here both with Santoprene and in the base business in the second-half of the year.

---

**Ghansham Panjabi**

*Analyst, Robert W. Baird & Co., Inc.*

Q

Awesome. Thanks so much.

---

**Operator:** Thank you. Our next question is from the line of Kevin McCarthy with Vertical Research Partners. Please proceed with your questions.

---

**Kevin W. McCarthy**

*Analyst, Vertical Research Partners LLC*

Good morning. Lori, I was wondering if you could talk through the energy spike in Europe as energy costs there quadruple or quintuple. How are you dealing with that in practical terms? And with regard to efforts to recover, how much might be permanent price increases versus surcharges? How should we think about the energy pig moving through the python as the year progresses?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

I love the way you put that. That's great. We haven't talked about it in those terms but that is what it feels like right now. So, look, the spikes we saw in third quarter and then the even greater spikes that we saw in fourth quarter were really unprecedented as I think was pretty clear from the chart and I mean it's been really volatile. Typically, if you look, we don't do – we do some hedging around energy prices in other parts of the world and even in Europe but we really do it to get security of supply. We do it to reduce volatility. We often do hedge in the fourth quarter and first quarter in the winters when we know we're more likely to get price increases.

With what happened in Europe, it was so unprecedented and so it came at such a fast rate. We really didn't have that opportunity at all. So that's what we had to pass-through those costs to our consumers. We chose to do it through a surcharge because – to reflect to our customers, it is temporary and it is based on an unusual set of events.

Look, no one likes a price increase. But I think that by doing it as a surcharge, our customers understand that this is a temporary measure and we're really not seeing any tangible loss of volume from customers, one, because everybody is experiencing these price increases; and two, some of the supply logistic constraints right now make it really hard for people to source from other places.

But as we go forward, we do expect prices to moderate again. We are taking some steps to try to protect ourselves in the future from these kinds of run-ups. And, look, some of the price increases we've had that were just price increases based on other raw materials, we'll see the benefit of those for some times to come because these are value-priced items that those price increases will stick for a while. The surcharge will go away when the energy price goes away. But as we called out in our remarks, we do expect with the other – with the increases we've had to add on the surcharges that sometime in the first quarter we'll be recovering all of the additional energy pricing that we've experienced.

**Kevin W. McCarthy**

*Analyst, Vertical Research Partners LLC*

Q

Okay. Thank you for that. And then secondly I wanted to ask about your range of \$15 plus or call it \$15 to \$16 for 2022, just recognizing that it's a really dynamic external environment with lots of dislocations. Just broadly what do you think are the two or three biggest swing factors that could allow you to over-deliver or under-deliver versus that target level?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Well, the number one factor and it's what we saw this year is acetic acid pricing and acetyl value chain pricing. I mean while we can do a lot with commercial actions and with the agility and kind of commercial expertise of our

teams and we do that by managing volumes around the world and up and down the chain, base pricing still matters. And so to the extent we see supply tightness, whether they be from weather events, whether they be from unplanned shutdowns, supply tightness in a market that is at, let's say, 85% to 90% utilization, it reflects very quickly in increased prices in the Acetyl Chain. So to the extent that we have more disruption and volatility in the Acetyl Chain market this year, we'll see pricing go up and that would give us additional uplift on that outlook for the year.

Inflation is obviously an issue as the supply chain and so we're assuming the supply chain restrictions we see this year moderate over the course of the year. We're not assuming they're perfect but we are assuming they're starting to moderate over the course of the year. If we see that not happen, that will have some impact. But as you saw those numbers are in the 10s and 20s of millions in a quarter, not hundreds like we would see acetyl pricing.

And then for EM, I think auto recovery is a big issue. Again, we've assumed pretty flat auto between 2021 and 2022 based on chip shortages. But if we see that resolved then there's some good upside for Engineered Materials in there for increased sales into auto.

---

**Kevin W. McCarthy**

*Analyst, Vertical Research Partners LLC*

Q

Perfect. Thanks so much.

---

**Operator:** Thank you. Our next question comes from the line of Vincent Andrews with Morgan Stanley. Please proceed with your questions.

---

**Vincent Stephen Andrews**

*Analyst, Morgan Stanley & Co. LLC*

Q

Thank you and good morning, everyone. You mentioned in the prepared comments in the Acetyl Chain that your RDP business, the volumes were up, I think you said 25% versus their historical peak and that should be shifting more of your mix there and I guess broader emulsions in 2022. So could you just talk to us a little bit about what's happening in RDP that was allowing that volume performance? Is it something you were doing with the asset under their new ownership? Is it the market, is it both? Where's the demand coming from in terms of segments or is it shifting from other products but just give us a little more color on what's happening there?

---

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. Look, we've seen very strong demand and pricing from the construction sector, specifically for emulsions and powders, so whether it be paints and coatings or these insulation systems that I talked about earlier, we are seeing very strong demand there. And as a lot of countries put in additional energy efficiency requirements or greenhouse gas footprint reduction requirements, we expect that we will continue to see very strong demand continue for emulsions and powders.

I think what's changed there is with our acquisition of Elotex which led us get into the RDP market we've been able to take those assets. We've been able to debottleneck them quickly. We've been able to run them harder. Because we're vertically integrated we will run them full because we still see the value of the acetic acid that's going into them, coming out of RDP maybe something that someone who's not vertically integrated would struggle to do. And so we've just been able to run them harder.

We've also been able to get more I'd guess – I'd say innovative in terms of marketing our emulsions and RDP together as a package which allows customers and some of these things like the thermal insulation systems to buy a system of products that works for their needs versus having to go source them independently. And so commercially that's been a big win for us and something we think is really going to secure the sector and improve the margins of the sector going forward.

**Vincent Stephen Andrews**

*Analyst, Morgan Stanley & Co. LLC*

Q

Okay. And if I could just ask a follow-up on the auto comments, when you're talking about autos for 2022, you're obviously speaking to your own volume and what your expectations are. You also mentioned in the prepared remarks about the tiers were doing some destocking in the fourth quarter. I just want to understand whether was that just sort of typical fourth quarter destocking for working capital purposes or was that just a function of they had built too much inventory in 4Q – sorry in 2021 versus what the chips allowed them to do and is that destocking done or is there something that could be a feature of this year as well?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. Great question. So our belief is we saw really good demand still in third quarter despite a low level of auto builds in third quarters and our belief is the tiers were continuing to build inventory in anticipation of a really robust fourth quarter. With chip availability being what it was, fourth quarter did come back but not as strongly as everybody expected. And then it was year-end, so the tiers chose to just do some destocking over the quarter so that they didn't have year-end inventories quite as high.

We still believe inventories are very low in the tiers and so we don't expect that to be an ongoing phenomena. We think it was simply a year-end phenomena. We expect to see demand come back robustly in first quarter and on through the rest of the year based on improved auto builds but also based on the tiers [ph] need (00:31:43) to rebuild inventory.

**Vincent Stephen Andrews**

*Analyst, Morgan Stanley & Co. LLC*

Q

Okay. Thank you very much. Appreciate all the thoughts.

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Thank you.

**Operator:** Our next question comes from the line of P.J. Juvekar with Citi. Please proceed with your questions.

**P.J. Juvekar**

*Analyst, Citigroup Global Markets, Inc.*

Q

Yeah. Hi. Good morning, Lori and Scott.

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Hi, P.J.

**P.J. Juvekar**

*Analyst, Citigroup Global Markets, Inc.*

Q

In China, you and your competitors were impacted by dual-control. And I think dual control has ended now and they built up their coal inventories and dual control has ended. What does that mean for more acetyl's production in China? Do you see that happening?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. I definitely see the ability for that to happen. If we look at the curtailment in China, we lost about 25,000 tons of lost production; about half of that was VAM and the other half was a combination of acetic acid and other derivatives. So that was about \$20 million to \$25 million of lost margin due to that curtailment.

So assuming we don't have any curtailment then that's obviously volume that we can produce into the system and our expectation is the same as yours. We don't see any indications that we'll have curtailments this year either.

**P.J. Juvekar**

*Analyst, Citigroup Global Markets, Inc.*

Q

Okay. And then Europe has been difficult for many companies as oil prices went up and there was limited pricing. How is your European operation holding up in general as a region and can you just make any comments on what you're seeing going forward? Thank you.

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. I don't think we've really seen any major impacts on our business from the increase in oil pricing. I mean as we've called out before generally we do better with higher pricing in acetyl that can get pass-through immediately. It takes a little bit longer in EM, but generally we do better with higher pricing. The real impact we've had this year has been from natural gas in Europe and the impact that that's had on specifically our EM operations in Europe as well as our tow operations in Europe where we just, in those contracts, we haven't had the opportunity to pass on the additional cost of natural gas and utilities based on natural gas through to the consumer real-time. We've had a lag in that pass-through pricing.

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

A

But I do think P.J., the one thing that we do love is having in-region capacity and our assets in Europe are running at a high rate. With the supply chain issues and the issues around logistics and product coming in from other regions that has helped us be able to sustain and offset some of these increases in raw materials.

**P.J. Juvekar**

*Analyst, Citigroup Global Markets, Inc.*

Q

Great. Thank you.

**Operator:** Our next question comes from the line of David Begleiter with Deutsche Bank. Please proceed with your questions.

**David Begleiter**

*Analyst, Deutsche Bank Securities, Inc.*

Q

Thank you. Good morning. Lori, in the prepared comments you call out some turnaround costs in acetyls above Q1 and Q2. Can you quantify those costs?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. If we look at 2021, we had a total of right around \$40 million in turnaround costs. And in 2022, we expect that to be about the same. Last year, it was spread across a wider variety of assets. This year, our large turnarounds will be the two we called out. We have – Fairway has a turnaround in the first quarter and then we have a Clear Lake acetic acid plant turnaround that starts at the end of the first quarter and goes into the second quarter.

**David Begleiter**

*Analyst, Deutsche Bank Securities, Inc.*

Q

Very good. And just back to M&A, if you are unable to make a transformational acquisition in EM, could you or would you ramp up organic spending in that business?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

So, we're still planning on high organic spending. I mean we're planning on \$600 million capital next year. Part of that is completion of the Panther Project in the acetyls business. But the rest of the – most of the rest of that is really in Engineered Materials where we'll be spending about the same amount we spent for Panther as we do some of our expansion projects and newbuilds in China and really all parts of the world.

So I'd say the M&A is not having a big impact on our view of organic investment. Organic investments continues to be our highest return and so we've ramped those projects up as we see our ability to strategically and efficiently deploy capital. So, I don't think that will make a difference in terms of our organic investment.

**David Begleiter**

*Analyst, Deutsche Bank Securities, Inc.*

Q

Understood. Thank you.

**Operator:** Thank you. Our next question comes from the line of Hassan Ahmed with Alembic Global. Please proceed with your question.

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*

Q

Good morning, Lori and Scott. A question around you guys has sort of relative degree of; call it, satisfaction with your upstream integration. I mean obviously we've seen some seismic shifts over the last couple of months be it the European natural gas situation, the new Five-Year Plan presented in China, obviously you're looking for significant curtailments in coal usage.

So as you've sort of seen all of those things, does that make you sort of rethink maybe the integration strategy, maybe you guys should be more integrated. I don't know how you guys are thinking about that with some of this goings on?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

Hassan, I assume you're thinking more about integration in terms of upstream...

A

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*

Upstream integration, correct. Yes.

Q

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

...into the Acetyl Chain. Yeah.

A

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*

Indeed.

Q

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

Yeah. So, we – look, right now we get about – we produce about 40% of our own methanol. We kind of like that balance of being able to produce methanol or buy methanol depending on where the markets are and what the sources of value are. We're pretty happy with that.

A

We constantly reevaluate. We look at opportunities to go further upstream. But I would say right now we're pretty happy at about that 40% range we're at.

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

Yeah. And with the methanol expansions we've already announced Hassan, I mean that's going to be able to take and help us with some of the growth that we expect largely in the Acetyl Chain over the next several years.

A

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*

Understood. Understood. And just also wanted to revisit M&A, I mean you guys talked about considering anything from bolt-on to transformational. Just – I just wanted to get a better sense of if you guys have a preference or not for certain regions. Only reason I bring that up is there seemed to be some chunky assets in Europe that are either spinning off, looking to be acquired. I'm thinking in terms of the DSM plastics unit, the Lanxess' HPM business.

Q

I mean the question really is you guys have a sizable presence in Europe as is, would you consider doubling down in Europe? Would you be dissuaded by that? Just, regionally, how you're thinking about M&A?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

Hassan, I would say I am geographically agnostic. I am – it is all about value for me. So, we look at all M&A targets for the opportunity to create value for Celanese. I mean, clearly we want it to be a good strategic fit. But

A



we really look at synergies and all the other aspects of a deal to make sure it is something that we believe will create outside value for Celanese and our shareholders.

**Hassan I. Ahmed**

*Analyst, Alembic Global Advisors LLC*



Very helpful. Thank you.

**Operator:** Our next question comes from the line of John McNulty with BMO Capital Markets. Please proceed with your question.

**John McNulty**

*Analyst, BMO Capital Markets Corp.*



Yeah. Good morning. Thanks for taking my question. So in the Acetyl Chain, you guys demonstrated this past quarter again the kind of ability to flex the global network to take advantage of kind of regional changes in price and what-have-you. I guess how did you do that given all the freight and logistics constraints that are out there? And I guess as those start to alleviate, does that give you even more shots on goal and more opportunities? How should we be thinking about that?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*



I think you're right. I mean I think fourth quarter continues to demonstrate the real strength of the business model we have in Acetyls. I think there you really see kind of the breadth of our manufacturing footprint being present in three different geographies, the agility of our supply chain. It's made us really good, I would say even better, at adapting to and capitalizing on disruptions of which we've seen a lot this year. And I think the performance of our Acetyl team is really impressive this year. If you look at all of the opportunities we had to not be agile, they've really taken advantage of it and created a lot of value for the company this year.

I think you see that – we really focused on China this year. Prices were very high but at the very end of the year, the team was able to shift AC sales more to the Western Hemisphere where prices held up longer. In fact in the fourth quarter, we saw the highest percent of our volume going into the Western Hemisphere that we have this year. It was about a 10% swing from China to the Western Hemisphere. Similarly, we saw swings out of acetic acid and more into VAM, emulsions and RDP. And I think that is the value of what we have with kind of end-to-end value chain as well as geographic diversity.

I would say, look, we've had some issues around supply chain, logistics and freight like many of them and like many folks have. But I would also say our team has been amazingly resilient and flexible in securing ships, securing whatever they needed to do and making sure we could move things as we needed to, to really maximize the value of that chain.

Look, like anybody, it took us a little bit longer in some cases to fill out those value chains. But I would say we're through that now and have the lead times in place to really be able to continue to take advantage of them.

**John McNulty**

*Analyst, BMO Capital Markets Corp.*



Got it. No, that's helpful. And then maybe a question for Scott around again the M&A commentary and I guess just given the significant cash flows that you guys have been throwing off, maybe more so than some expected. I guess can you help us to understand what or how much you can stress or flex the balance sheet and still keep

your investment-grade rating? Can you go north of 4 times? Is that kind of a leverage hurdle that's doable in your mind just given the strength of the cash flows? I guess how should we think about that?

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

A

Well, John, I mean every deal is going to be unique and different. And I think a lot it depends upon how much EBITDA we're buying and then what the makeup of the various assets would be that would be in that type of situation. So I mean I would say it really depends and I think we are really focused on making sure we generate a lot of cash.

And as Lori talked about synergies being critical in any deal and I think depending on levels of synergies, it's going to really dictate what we could do from a balance sheet perspective and it really comes down to cash generation. We feel really good about 2022 at \$1.4 billion and we think that cash generation with the growth in earnings that we project in the coming years is going to continue to be quite robust.

**John McNulty**

*Analyst, BMO Capital Markets Corp.*

Q

Fair enough and thanks for the color.

**Operator:** Thank you. The next question is from the line of Matthew Blair with Tudor, Pickering, Holt. Please proceed with your questions.

**Matthew Blair**

*Analyst, Tudor, Pickering, Holt & Co. Securities, Inc.*

Q

Hey. Good morning. Just maybe sticking on the M&A topic, Lori. Yeah, I thought the comments that you're looking at M&A in the Acetyl Chain were pretty interesting just given your large market position. Would this be something more downstream like emulsions or do you think you could consolidate acetic acid and VAM capacity in other parts of the world?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

That's a fair question, Matthew. Look, we do have a large position already in the Acetyl Chain. So, I think as we look at M&A for the Acetyl Chain, it is things more like Elotex, so further downstream in the value chain. That is more likely possibility than say any kind of a big M&A around acetic acid or some of those products where we already have a fairly large position.

**Matthew Blair**

*Analyst, Tudor, Pickering, Holt & Co. Securities, Inc.*

Q

Got it. And then in the prepared comments, you noted that you're immediately sold out of the Bishop GUR plant that just started up. Are there any like low-cost expansion opportunities here or is it pretty much set at 15 kiloton?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

There are – we have been doing the low-cost expansions as we can. Our engineers are looking very hard at that. Obviously, GUR markets have continued to expand and grow at a rate much faster than anticipated. We grew

nearly 40% this last year. And so the expansion that we built in Bishop which we expected would last us 12 to 18 months of growth capacity is now already sold out.

So we continuously look for small expansions. The next large expansion we've already announced will be in Europe in 2024. Hopefully, we'll find some more before that. But we are pushing as hard as we can to grow as fast as we can in that area, but just limited right now by our ability to get metal in the ground.

**Matthew Blair**

*Analyst, Tudor, Pickering, Holt & Co. Securities, Inc.*

Q

Great. Thank you very much.

**Operator:** Thank you. Our next question is from the line of Arun Viswanathan with RBC Capital Markets. Please proceed with your questions.

**Arun Viswanathan**

*Analyst, RBC Capital Markets LLC*

Q

Great. Thanks for taking my question. Congratulations on another strong year. I guess just two questions. So, first off, could you just update us maybe on any parts of your portfolio that are still lagging, maybe thinking within the elective procedure side on EM, when do you expect that to get back to normal levels?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Thanks, Arun. We saw good growth actually in implants this year, about a 20% improvement over 2020. But you are right, it is still lagging. We're still kind of 15% to 20% below where we were in 2019. Looking at what the implant makers are saying, we don't expect full recovery of implant volumes until we really get into 2023 at this point.

**Arun Viswanathan**

*Analyst, RBC Capital Markets LLC*

Q

Okay. Thanks for that. And I just wanted to again go back to the question of deployment of cash. I mean, there's – again, there's quite a robust trajectory here from \$1.4 billion and potentially growth from there over the next couple of years as you bring on these investments. So does it make sense at least to potentially accelerate the capital return in light of still high valuation multiples or are you looking to continue the inorganic growth side?

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

A

Well, I think – I mean as Lori said earlier I mean our focus is always on organic growth first. Those are historically our highest return projects. And we've got \$600 million earmarked this year for capital to invest back in ourselves. And then what we've historically done is take that free cash flow and this year at \$1.4 billion, and then deploy that forward to service the dividend and then for repurchases and M&A. And that's – with where the dividends at that's likely going to be somewhere in \$1 billion, slightly more than \$1 billion of capital that we'll be able to deploy back with that for M&A and for repurchases.

So I think that focus really hasn't changed. And given with that cash generation we think just presents more opportunity for us.

**Arun Viswanathan**

*Analyst, RBC Capital Markets LLC*

Okay. Thanks.

Q

**Operator:** Thank you. The next question is from the line of Aleksey Yefremov with KeyBanc. Please proceed with your questions.

**Aleksey Yefremov**

*Analyst, KeyBanc Capital Markets, Inc.*

Thanks. Good morning. You have a fairly sizable nylon compounding business. As you look at transition to EVs, do you think nylon has risks related to content loss because of its use in high-heat applications or is there still a net content gain because of new nylon applications?

Q

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

It's a great question and one we're hearing a lot. Our belief is we don't expect a decline in nylon with the move to EVs. There are a lot of applications for nylon in EV. So the high-speed connectors, the powertrain and obviously body, the interior. Nylon is really good for lightweighting and still being able to get strength and dimensional stability.

A

In fact, we've had a few new applications using nylon into EVs. So we have a Celstran application that's going into a tailgate on an electric vehicle for example. So it's lightweight. It has good appearance, high strength. It saves money because it's one piece versus two pieces. So we really see more – I would say at least equal if not more opportunities for nylon into EVs as we're in conventional vehicles.

**Scott A. Richardson**

*Executive Vice President & Chief Financial Officer, Celanese Corp.*

Yeah, Alex, I also wouldn't underestimate the power of recycled nylon. And this has been one of the things that we have gained through acquisition and we've been really growing that ECOMID part of our nylon portfolio. As our customers look for more and more recycled content, nylon is a great material to recycle, and the opportunities that we have and the portfolio upgrades that we continue to grow has been a really nice area of acceleration for us.

A

**Aleksey Yefremov**

*Analyst, KeyBanc Capital Markets, Inc.*

Thanks so much.

Q

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

About nylon – but I would also say there's a lot of nylon in things associated with EVs like the charging stations and other electrification components. So outside the vehicle itself, we see a lot of new applications developing for nylon.

A

**Aleksey Yefremov**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

That's great. Thanks a lot. And on excess inventories of your EM products at the tier suppliers, do you have a sense of they have, I don't know, one or two or five months of that excess inventory? And also do you yourselves have any excess auto product inventory?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

So I'll take the last one first. We do not have excess inventory. We have hardly any inventory at all. This has been a year where we could pretty much sell anything we could make. Our belief is the tiers aren't sitting there with a lot of inventory. Again, we think it was a year-end phenomena that they decided to just draw down what little bit that they had and we don't expect that to continue into 2022.

**Aleksey Yefremov**

*Analyst, KeyBanc Capital Markets, Inc.*

Q

Thank you.

**Operator:** Thank you. Our next question is from the line of Steve Richardson with Evercore ISI. Please proceed with your question.

**Kieseane Riddick**

*Analyst, Evercore ISI*

Q

Hello. Hi. This is Kieseane Riddick calling on behalf of Steve. Going back to commodity volatility with nat gas prices still being high domestically and abroad, how quickly are costs flowing through? Are they a little bit faster than expected? And I guess particularly on the EM side as you mentioned that there's been a bit of a lag on the ability to pass on higher costs?

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Great question. And we've called out a little bit we started doing energy surcharges at the end of third quarter. With those surcharges, we were able to recover about \$20 million worth of energy costs in the fourth quarter. But energy costs skyrocketed far beyond what we expected, so we had \$15 million uncovered by those surcharges in the fourth quarter.

We do expect with those surcharges now flowing through that we will get recovery of that sometime in the first quarter, we'll be at a point where we're recovering all of that. And then we expect energy prices to be fairly flat for us as we go through the first quarter. So we expect again sometime in the first quarter we should be fully recovering all of that.

**Kieseane Riddick**

*Analyst, Evercore ISI*

Q

Thank you so much. And then just a follow-up, you mentioned obviously the auto has rebounded, in particular chip shortage being a possible swing factor for \$15 guidance of possible upside. Can you give a little bit more color as to what auto OEMs are saying about the shortage? Just overall this feels like the chip shortage continues to last for longer than expected. Thank you.

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Yeah. Look, I think the OEMs are predicting a faster recovery and some are probably having more success getting chips than others. I would say we tend to look at IHS. IHS is predicting kind of mid, high single-digit growth globally into next year from this year which will still be mid-to-high-single-digits behind where we were pre-COVID. So they're not predicting full recovery but let's say kind of half of the way there.

Our own outlook is more conservative based on what we're seeing and what we're hearing around chip shortages. But – so that's where the upside is. If IHS is right, which we all hope they are, that chips come back more quickly and we see that kind of recovery, then we'll have additional upside in our auto volumes as well.

---

**Brandon Ayache**

*Vice President-Investor Relations, Celanese Corp.*

A

Rob, let's make the next question the last one please.

---

**Operator:** Sure. That question will be coming from the line of Jaideep Pandya with On Field Investment.

---

**Jaideep Pandya**

*Analyst, On Field Investment Research LLP*

Q

Thank you so much. The first question is really around your GUR expansion. Could you just tell us like is this mainly going into the separator market, and if so, is it more dry versus a wet separator because obviously there's a huge growth in PVDF in front of us, so just wanted to understand your potential further expansions in GUR in this regard.

And then the second question really is sort of around your comments around M&A. I mean you've outlined the sort of strength of the acetyls platform now in terms of also sustainability. So do you think that Celanese in terms of the structure as it is today with EM and Acetyl is the way to go forward if there is a transformational deal, or should we think that if there is a transformational deal separate paths for those two businesses is also very much on the cards? Thanks a lot.

---

**Lori J. Ryerkerk**

*Chairman & Chief Executive Officer, Celanese Corp.*

A

Great. So, let me take your first question. So the Bishop GUR started up kind of at the end of 2021. That volume is essentially going to support the lithium-ion battery separator film growth that I called out earlier, and it is wet, for those of you that asked me before. So again we are looking to expand in every way as quick as we can. Those markets continue to grow very strongly but our next major expansion in GUR will be in 2024 in Germany with an expansion that we have there.

And then on your second question about M&A, look, we continue to value having our businesses together. I think we see the advantage of that this year and I think we'll see the advantage of that. If we do a big M&A that we get this great cash flow from Acetyls which help – which gives us more flexibility and capability to support larger M&As. Obviously, we think we have talent advantages for having a bigger group and other advantages about – because a lot of materials coming out of the Acetyl Chain gets used in Engineered Materials. So we like having the businesses together.

As I've said on this call before we never say never. If at some time we think we would need to separate them to realize the value of the assets we of course would always consider doing what's best for the shareholder. But at this point in time, we think we see having these businesses together as we go forward.

**Jaideep Pandya**

*Analyst, On Field Investment Research LLP*



Thanks a lot.

---

**Operator:** Thank you. At this time, I'll now turn the call over to Brandon Ayache for closing remarks.

**Brandon Ayache**

*Vice President-Investor Relations, Celanese Corp.*

Thanks, Rob. We'd like to thank everyone for listening in today. As always, we're around after the call if you have any follow-up questions at all. Rob, please go ahead and close up the call.

---

**Operator:** Thank you. This concludes today's conference. You may disconnect your lines at this time. Thank you for your participation.

**Disclaimer**

The information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete or error-free statement or summary of the available data. As such, we do not warrant, endorse or guarantee the completeness, accuracy, integrity, or timeliness of the information. You must evaluate, and bear all risks associated with, the use of any information provided hereunder, including any reliance on the accuracy, completeness, safety or usefulness of such information. This information is not intended to be used as the primary basis of investment decisions. It should not be construed as advice designed to meet the particular investment needs of any investor. This report is published solely for information purposes, and is not to be construed as financial or other advice or as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Any information expressed herein on this date is subject to change without notice. Any opinions or assertions contained in this information do not represent the opinions or beliefs of FactSet CallStreet, LLC. FactSet CallStreet, LLC, or one or more of its employees, including the writer of this report, may have a position in any of the securities discussed herein.

THE INFORMATION PROVIDED TO YOU HEREUNDER IS PROVIDED "AS IS," AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, FactSet CallStreet, LLC AND ITS LICENSORS, BUSINESS ASSOCIATES AND SUPPLIERS DISCLAIM ALL WARRANTIES WITH RESPECT TO THE SAME, EXPRESS, IMPLIED AND STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, COMPLETENESS, AND NON-INFRINGEMENT. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER FACTSET CALLSTREET, LLC NOR ITS OFFICERS, MEMBERS, DIRECTORS, PARTNERS, AFFILIATES, BUSINESS ASSOCIATES, LICENSORS OR SUPPLIERS WILL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION DAMAGES FOR LOST PROFITS OR REVENUES, GOODWILL, WORK STOPPAGE, SECURITY BREACHES, VIRUSES, COMPUTER FAILURE OR MALFUNCTION, USE, DATA OR OTHER INTANGIBLE LOSSES OR COMMERCIAL DAMAGES, EVEN IF ANY OF SUCH PARTIES IS ADVISED OF THE POSSIBILITY OF SUCH LOSSES, ARISING UNDER OR IN CONNECTION WITH THE INFORMATION PROVIDED HEREIN OR ANY OTHER SUBJECT MATTER HEREOF.

The contents and appearance of this report are Copyrighted FactSet CallStreet, LLC 2022 CallStreet and FactSet CallStreet, LLC are trademarks and service marks of FactSet CallStreet, LLC. All other trademarks mentioned are trademarks of their respective companies. All rights reserved.