

27-Apr-2022

# Seagate Technology Holdings Plc (STX)

Q3 2022 Earnings Call

## CORPORATE PARTICIPANTS

**Shanye Hudson**

*Senior Vice President-Investor Relations and Treasury, Seagate Technology Holdings Plc*

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

---

## OTHER PARTICIPANTS

**Wamsi Mohan**

*Analyst, Bank of America Merrill Lynch*

**Thomas O'Malley**

*Analyst, Barclays Capital, Inc.*

**Patrick J. Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

**Steven B. Fox**

*Analyst, Fox Advisors LLC*

**Erik W. Woodring**

*Analyst, Morgan Stanley & Co. LLC*

**Aaron Rakers**

*Analyst, Wells Fargo Securities LLC*

**C J. Muse**

*Analyst, Evercore ISI*

**Kevin Cassidy**

*Analyst, Rosenblatt Securities, Inc.*

**Ananda Baruah**

*Analyst, Loop Capital Markets LLC*

**Jim Suva**

*Analyst, Citigroup Global Markets, Inc.*

**Mehdi Hosseini**

*Analyst, Susquehanna Financial Group LLLP*

**Mark Miller**

*Analyst, The Benchmark Co. LLC*

## MANAGEMENT DISCUSSION SECTION

**Operator:** Welcome to the Seagate Technology Fiscal Third Quarter 2022 Conference Call. All participants will be in a listen-only mode. [Operator Instructions] After today's presentation, there will be an opportunity to ask questions. [Operator Instructions] Please note, this event is being recorded.

I'd now like to turn the conference over to Shanye Hudson, Senior Vice President of Investor Relations and Treasury. Please go ahead.

---

### Shanye Hudson

*Senior Vice President-Investor Relations and Treasury, Seagate Technology Holdings Plc*

Thank you. Good afternoon, everyone, and welcome to today's call. Joining me are Dave Mosley, Seagate's Chief Executive Officer; and Gianluca Romano, our Chief Financial Officer. We've posted our earnings press release and detailed supplemental information for our March quarter fiscal 2022 on the Investors section of our website.

During today's call, we'll refer to GAAP and non-GAAP measures. Non-GAAP figures are reconciled to GAAP figures in the earnings press release posted on our website and included in our Form 8-K that was filed with the SEC. We have not reconciled certain non-GAAP outlook measures because material items that may impact these measures are out of our control and/or cannot be reasonably predicted. Therefore, a reconciliation of the corresponding GAAP measures is not available without unreasonable effort.

Before we begin, I'd like to remind you that today's call contains forward-looking statements that reflect management's current views and assumptions based on information available to us as of today and should not be relied upon as of any subsequent date. Actual results may differ materially from those contained in or implied by these forward-looking statements as they are subject to risks and uncertainties associated with our business.

To learn more about the risks, uncertainties and other factors that may affect our future business results, please refer to the press release issued today and our SEC filings, including our most recent annual report on Form 10-K and quarterly report on Form 10-Q as well as the supplemental information, all of which may be found on the Investors section of our website. As always, following our prepared remarks, we'll open the call for questions.

Let me turn the call over to Dave for opening remarks.

---

### William David Mosley

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

Thank you, Shanye, and a warm welcome to those of you joining us on today's call. Before I begin, I would like to recognize the growing humanitarian crisis taking place in Ukraine. Our thoughts are with the people impacted by the devastation as we continue to hope for a rapid end to this conflict.

As this crisis unfolded, distribution channels across the region were understandably impacted, adding to an already strained global supply chain. Specific to our business, we ceased shipments into Russia and Belarus at the onset of the invasion, which typically represents 1 to 2 percentage points of revenue on a quarterly basis. We expect these impacts to persist at least through the fiscal year.

Turning to Seagate's March quarter financial performance – revenue of \$2.8 billion and non-GAAP EPS of \$1.81 were within the ranges provided on our last earnings call and consistent with the revised outlook we shared last month. We continue to see solid cloud demand and that boosted revenue for our nearline products to a fifth consecutive quarterly record.

The strong nearline performance was offset to a degree by demand disruptions in other end markets. These include non-HDD component shortages as well as new COVID lockdown measures that intensified toward the end of March, sharply impacting the video and image applications or VIA market. Rising inflationary pressures were an additional burden on profitability for the quarter as we continued to operate amid an unusual mix of external challenges.

Our team is executing at a high level in this environment, and that is best illustrated with a few key year-over-year comparisons. Relative to Q3 of fiscal 2021, we grew total revenue 3% and nearline revenue 24%. We improved margins and demonstrated strong financial leverage with operating income growth of 12%, significantly faster than revenue growth. And we generated free cash flow of \$363 million, up 32% year-over-year.

These achievements reflect the resiliency of our financial model and our focus on driving profitability and cash generation in an environment where we are poised to capitalize on strong secular growth for mass capacity storage. While the underlying storage demand trends remain intact, the industry-wide supply challenges, impacts from the ongoing conflict in Ukraine and COVID restrictions are constraining growth over the near term, which we've factored into the June quarter guidance we're providing today.

Throughout the past couple of years, our strong supplier relationships, combined with our vertically integrated business model, have enabled us to navigate supply risks to support HDD customer demand. All the while, we've remained highly focused on protecting profitability. In addition to maintaining strong expense discipline, we have recently started to adjust pricing to help combat inflationary impacts in future quarters.

Finally, we continue to strategically manage production and execute our product and technology roadmap. These actions are intended to reduce our cost per terabyte and realize operational efficiencies, while delivering cost-efficient, higher capacity solutions to our customers when they need them most.

As we indicated on our last call, we leveraged the seasonal slowdown in the March quarter to begin staging our factories to support strong 20-terabyte demand. I'm delighted to report that we are shipping 20-plus terabyte products in high volume and expect unit shipments to more than triple quarter-over-quarter in F Q4 to well over 1 million units. This puts us on pace for the company to achieve crossover with 18-terabyte drives early in the new fiscal year.

The ability to quickly ramp and yield higher capacity products is especially important considering the strong cloud data center demand for nearline drives. Recent CIO surveys confirm that even in today's challenging macro environment, digital transformation, AI and machine learning, remain among the top handful of IT investment priorities.

With current non-HDD supply shortages impacting new data center buildouts, many of our cloud customers, particularly in the US, are operating at or near record utilization levels and upgrading to higher capacity drives in an effort to keep pace with demand. Seagate is addressing these needs by being the first to high volume with the 20-plus terabyte products, which represents the highest capacity drives commercially available today.

With more than half of our cloud business currently covered under long-term agreements, we have visibility to healthy cloud demand into the back half of the calendar year. In the March quarter, mass capacity revenue increased 18% year-over-year and decreased 6% sequentially off a record December quarter. Strong double-digit sequential growth in cloud nearline sales partially offset the impacts of demand constraints in the other mass capacity end markets.

In the enterprise and OEM market, some customers continue to grapple with non-HDD supply shortages that have impacted their ability to get parts and address their own end demand. COVID lockdown measures are limiting near-term demand in the VIA markets. In the March quarter, new security surveillance and smart city infrastructure projects were delayed due in large part to physical installations being hindered. This situation is similar to what the VIA market experienced in the early days of the pandemic. And based on input from our customers, we remain confident that these projects will resume once conditions improve, which we now expect to occur in the back half of the calendar year.

At a high level, demand for video and image applications is on the rise. Increasing adoption of high-definition cameras, longer data retention rates and the use of AI and analytics enable end users to identify patterns for months of captured data and extract value. Analysts predict that nearly two-thirds of network video cameras will have embedded AI/deep learning analytics by 2025 compared with about 15% in 2020.

Indicative of these demand trends, Seagate offers purpose-built VIA drives that support the heavier workloads and firmware to optimize video AI applications. Our strong customer relationships and breadth of knowledge in storage devices and systems and software architectures, have enabled us to develop product and technology solutions that address the evolving mass capacity storage and infrastructure needs. For example, Seagate's Lyve Cloud platform is aimed at meeting the growing need for a simple, predictable and cost-efficient mass data storage as a service solution.

To date, we've qualified nearly 30 ecosystem service providers offering capabilities such as backup and recovery that are interoperable with Lyve Cloud. We recently launched Lyve Cloud Singapore, our first platform in the Asia markets. We are continuing to responsibly build out our infrastructure and selectively work with new customer use cases. Overall, I'm really pleased with our progress and ongoing customer momentum. We look forward to sharing more in the year ahead.

Looking ahead, Seagate remains well positioned to achieve our long-term financial and business goals. We are focused on driving profitability towards the upper half of our long-term margin ranges over the next few quarters. At the same time, we expect to extend our track record of strong cash flow generation, while executing our product and technology roadmap that collectively puts us on the right path to capture mass capacity storage opportunities and enhance value for all of our key stakeholders. We are taking aggressive actions that span cost management, pricing strategy and operational efficiencies that target margin expansion and further strengthen our competitive position.

I'll now hand the call over to Gianluca to cover the financial results.

---

## Gianluca Romano

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

Thank you, Dave. Seagate navigated its way through a very dynamic macro environment in, typically the slowest seasonal period of the year to deliver financial performance, consistent with our revised expectation from the beginning of March.

In the March quarter, revenue was \$2.8 billion and reflected 3% year-over-year increase. Non-GAAP operating margin was nearly 17%, up 140 basis points year-over-year. Non-GAAP EPS was \$1.81, up 22% year-over-year. The hard disk drive business shipped approximately 154 exabytes, down 6% sequentially and up 10% year-over-year. Strong demand for high-capacity nearline drives boosted average capacity per total HDD drive to a record 6.7 terabyte, up 10% sequentially and 32% year-over-year.

Demand for our nearline product supported mass capacity revenue of \$1.9 billion, down 6% sequentially, but up 18% compared with the prior year period. Shipments into the mass capacity market totaled 133 exabytes, down 3% sequentially and up 20% year-over-year.

Our nearline product segment continues to grow, with revenue outpacing the broader mass capacity business once again. In the March quarter, we increased shipments to 117 exabytes, up 6% sequentially and 23% year-over-year, supported by the ongoing adoption of our 18-terabyte drives and initial volume shipments of our new 20-plus terabyte products. Our leading nearline portfolio, coupled with a very agile supply chain, resulted in a record cloud market revenue in the March quarter.

Consistent with our comments in early March, demand for the VIA markets were lower than anticipated due primarily to delayed project spending in China, resulting from disruption related to COVID and shifting government priorities. We do expect demand to improve once COVID-related restrictions begin to ease and project installation can resume.

Within the legacy markets, revenue came in at \$642 million, down 17% sequentially and 26% year-over-year. Quarter-over-quarter, the pace of decline was similar across each of the legacy end markets. However, the year-over-year decline was more pronounced in the PC market due in part to OEM continuing to balance component inventory.

Non-HDD revenue was down roughly 19% sequentially to \$237 million, coming off a record December quarter. Both our Systems and SSD businesses were impacted by key component availability, which left us unable to fulfill all the customers' demand, a trend that we expect to continue in the June quarter. Despite these challenges, non-HDD revenue was essentially flat year-over-year, and demand remains solid, notably for the system business, with record order backlog exiting the quarter.

Moving on to our operational performance. Non-GAAP gross profit in the March quarter was \$817 million compared to \$749 million in the prior year period. Our corresponding non-GAAP gross margin was 29.2%, down 150 basis points sequentially, but up 180 basis points year-over-year. The ongoing transition to both higher capacity drives and cost-optimized products provided some offset to the slowdown in the VIA market and continued elevated logistics and component costs.

HDD gross margin was inside of our long-term target range of 30% to 33%, and we expect our HDD and total company gross margin to trend higher in the June quarter. Non-GAAP operating expenses were \$345 million, in line with our expectations. We estimate OpEx will move slightly higher in the June quarter due to an increase in business travel and sales and marketing activities.

Our resulting non-GAAP operating income was \$472 million, which translates into non-GAAP operating margin of 16.8%, and reflecting lower sequential business volumes and the temporary margin pressures discussed earlier. Based on diluted share count of approximately 222 million shares, non-GAAP EPS for the March quarter was \$1.81, within our original guidance range and consistent with our update in early March.

Inventory increased by \$192 million to approximately \$1.5 billion as we continue making strategic purchases of critical components, optimize use of ocean freight to reduce logistic costs and support future product demand. Given the current macro environment, we believe inventory around this level is appropriate for the next couple of quarters.

Capital expenditures were \$97 million for the quarter, up slightly quarter-over-quarter. We expect to be at or below the low end of our target range of 4% to 6% of revenue for fiscal 2022, which is adequate to support our future product and services roadmap, while maintaining our focus on aligning HD supply with demand.

Free cash flow generation for the March quarter was \$363 million, up 32% year-over-year. Fiscal year-to-date through our March quarter, we have generated nearly \$400 million more in free cash flow as compared to the previous year, enabling Seagate to continue its strong return of capital to shareholders.

In the March quarter, we used \$154 million for the quarterly dividend and \$417 million to repurchase 4.2 million ordinary shares, exiting the quarter with 216 million shares outstanding and approximately \$2.8 billion remaining in our authorization.

We ended the March quarter with cash and cash equivalents of \$1.1 billion, and total liquidity was approximately \$2.9 billion, including our revolving credit facility. Adjusted EBITDA was \$2.7 billion for the 12-month period ending in March, with our leverage ratio declining slightly to 2.1 times. Total debt balance at the end of the quarter declined to \$5.6 billion, reflecting the planned repayment of \$220 million in debt during the March quarter.

In summary, while the March quarter was very challenging, we delivered top and bottom line results that were within our original guidance range, with agile operational execution and ongoing focus on optimizing profitability and free cash flow generation.

Entering the June quarter, the operating environment has remained challenging. We have not yet seen an improvement relative to COVID shutdowns in China that we anticipated in early March, and non-HDD component shortages and geopolitical dynamics have intensified. As a result, we expect these external factors to constrain demand growth over the near term.

With that in mind, we expect June quarter revenue to be in a range of \$2.8 billion, plus or minus \$150 million. We expect the actions that we are taking to mitigate external challenges, combined with a more favorable product mix to support June quarter non-GAAP operating margin at the low end of our revised long-term range of 18% to 22% of revenue. Finally, we expect non-GAAP EPS to be in the range of \$1.90, plus or minus \$0.20, an increase of 5% sequentially at the midpoint.

I will now turn the call back to Dave for final comments.

---

## William David Mosley

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

Thanks, Gianluca. The fundamental demand drivers for mass capacity storage remain intact. While the external challenges discussed today are impacting our Q4 outlook, I am confident in the long-term growth trajectory of the business, backed by the combined strength of our operational execution, technology roadmap and strong product portfolio. Demand for data continues to grow in both public and private clouds and at the edge, with a broadening of VIA applications. These trends support mass capacity revenue TAM doubling every five years or so and reaching \$26 billion by calendar 2026.

Seagate's leadership in mass capacity technology and strong product portfolio makes us ideally positioned to capture these opportunities from the 20-plus terabyte drives we are shipping today to the 30-plus terabyte HAMR products under development, along with our cost optimized portfolio of mid-cap drives. We are taking actions to improve margin and cash flow as we move through the calendar year, barring any additional macro disruption, which is consistent with our priorities to drive profitability and free cash flow generation.

Finally, embedded in Seagate's culture of innovation and execution is our commitment to running a sustainable business, one that balances profitability with people and our planet. We marked Earth Day this year with the release of our 16th Global Citizenship Annual Report and announcement of two important goals that reflect our deep commitment to sustainability. The first goal is to utilize 100% renewable energy across our global footprint by 2030. The second is to achieve net zero carbon footprint by 2040, done in collaboration with our customers to eliminate Scope 3 emissions and, in turn, support their environmental goals.

We continue to see opportunities to partner more closely with customers for the benefit of sustainability as well as circularity. The world's precious resources are finite, and we are working to expand programs focused on reducing our impact to the planet through efforts to recycle and reuse drives, components and raw materials. I'm very proud of the important work our teams are accomplishing. In fiscal 2021, we recycled more than 1 million drives and recovered over 1 metric ton of rare earth materials.

I'd like to conclude by thanking our employees for their incredible efforts, our suppliers and customers for their partnership, and our shareholders for their ongoing trust in Seagate. Gianluca and I will now take your questions.

## QUESTION AND ANSWER SECTION

**Operator:** We will now begin the question-and-answer session. [Operator Instructions] Our first question comes from Wamsi Mohan from Bank of America. Please go ahead.

**Wamsi Mohan**

*Analyst, Bank of America Merrill Lynch*

Q

Yes. Thank you. Good morning. Can you talk a little bit about the demand trends in China more broadly beyond the video and image applications market? And any impacts that you might be seeing from the lockdowns from a supply perspective as well? And maybe also comment on demand trends at hyperscalers. And I have a follow-up.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Sure. Thanks, Wamsi. Thanks for the question. A few things I'd say, just mindful of geopolitical challenges everywhere, and I think the channels, to your question, the distribution channels are quite disrupted everywhere; not just in Europe, but all over the world.

The COVID shutdowns, obviously affecting major cities. To the extent we have customers in those cities, the customers can't deal with their demand predictably, they can't install gear at the rate that they were thinking about because people who are in lockdown are, of course, having issues. We don't really have any concerns over China cloud long term, and there's strong customer interest in 18s and 20s and dual actuators and all the other things that we make for the cloud. So, that's actually a pretty good story for us still.

The VIA markets, like you've mentioned, but also the distribution channel is what's really being impacted more, and that's where you get value-added resellers that just can't – they don't have access to either their end customers very well or they don't have confidence. So there's a lot of trepidation around the channel and they're not pulling a lot of inventory into, which from a disk drive perspective is actually – I don't think there's too much inventory in the channels.

There are some other component issues to your question, so some people are having challenges getting smaller components. Relative to our logistics, the costs are up, but there's no real impact to our supply for HDDs. But we are mindful of the fact that they're – especially when we build the systems business, like in our script, Gianluca talked about some shortages we had in the systems business. When you get into smaller piece parts and more boutique parts that aren't high volume, it gets tougher, especially for a lot of those people doing the integration. That's what's affecting demand.

---

**Wamsi Mohan**

*Analyst, Bank of America Merrill Lynch*

Q

Okay. Great. Thanks, Dave. And then as a follow-up, given sort of all these macro headwinds and the changes in sort of the demand trajectory at least in the near term, how are you thinking about the calendar year? I know you had previously expected sort of a mid single-digit growth in that. It feels as though the second half now needs to have significantly higher growth than the first half, and compares are also a little bit tougher in the third quarter. So anything you can help us to think about the second half of the calendar year. Thank you.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah, that's right. The lockdowns and some of the other things that are going on, macro level, have affected the first half. We still think that there's growth coming in the second half. There's another year of mass capacity revenue growth which is plugging along nicely. There's healthy cloud demand we see further out. We do think some of these temporal things that I just referenced will abate at some point, but I think it's a little bit too early to call that number. So we'll probably just talk to you about it on the next earnings call.

Yeah, Gianluca wants to add something.

---

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Yeah. I would say, the COVID situation in China and Asia, in general, is probably limiting a little bit our visibility right now. So it's difficult to now have a clear estimate of the calendar 2022. But as Dave said, we are confident on a very strong second half of the calendar year.

---

**Wamsi Mohan**

*Analyst, Bank of America Merrill Lynch*

Q

Okay. Thank you so much.

---

**Operator:** The next question comes from Tom O'Malley from Barclays. Please go ahead.

---

**Thomas O'Malley**

*Analyst, Barclays Capital, Inc.*

Q

Hey, guys. Thanks for taking my question. You mentioned a couple of times in the script that you're going to continue to take actions to help margins and cash flow. Can you talk about the pricing environment? Are you looking strategically at how you're pricing your product, given the way that market trends have gone? I know like specifically, outside of the COVID impact you've already seen, just talk about the broad market. And are you using pricing to your advantage as you see inflation and some other factors impact your supply chain?

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. Thanks, Tom. I wouldn't say pricing to our advantage, but I would say that we're very mindful of all the trends that are going on. So there are freight and logistics costs which we've talked about fairly openly. In the early days, we called some of that COVID impacts. We really didn't quantify it anymore. But there is other raw materials that the prices are going up.

And the way we address those things are product transitions; complexity reduction, which is actually helping with some of the supply chain challenges; working with our customers to come up with more creative alternatives, say, for example, ocean freight, and the customers can help there as well. So we work in partnership. But we do need to be very mindful of the fact that as we go through product transitions to higher and higher content drives, we need to get paid for our investment as well. So, pricing will be a factor in all of those things. And that's what we're driving with the discussions that we have with our customers.

---

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Yeah. The pricing environment in March was still favorable, so it's not that we see deterioration on that standpoint. However, now we need to improve our gross margin. Part of the improvement will come from our mix with a much higher 20-terabyte volume, but we also need to work on our pricing in order to offset, at least partially, all the cost increase that we are getting from higher inflation and still very high freight cost, and also a little bit of the impact from the VIA segment.

VIA segment is a segment with a good gross margin for us. So having lower volume is, of course, impacting our financial performance. We think in the June quarter, the VIA segment will start to improve, but still not at the level we were expecting maybe three or four months ago. So, all this together is driving our decision to work a little bit on the pricing side. And as we said in the prepared remarks, we expect the June quarter to have higher profitability for Seagate.

---

**Thomas O'Malley**

*Analyst, Barclays Capital, Inc.*

Q

Got you. And then just as a follow-up. You've given some color on the VIA market. But just on the legacy market, in terms of exabytes, you saw a pretty substantial step down. I think you mentioned PCs year-over-year. What do you see that market doing in June? Obviously, that is probably external from some of the COVID and China impacts that you've seen. Where do you see that business trending into the June quarter and could you just describe some of the factors that are moving that around right now? Thank you.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. I think, for the large part, Seagate's not really exposed to the PC market anymore. There is a little bit, especially gaming PCs and some specialty PCs, there's a little bit in there still. The distribution channel still uses some PC drives as well, but the volume is very small compared to what it was historically. The other things like

consumer, obviously, consumers impacted by inflation, mission-critical is still in there because there's 100 million SAS slots out there in the world. Some of them want replacement drives and things like that. So it's, I would say, generally flat.

It is impacted by spending reductions that happened when things happened in the world. But what we saw in the front end of the pandemic is it came back relatively strong. I don't expect consumer to come back strong, like the work-from-home trends created. I don't expect this part of the pandemic to create the same thing. But the legacy market is not going down very much anymore. So flat is probably the way I'd call it for a couple of quarters.

**Operator:** The next question comes from Patrick Ho from Stifel. Please go ahead.

**Patrick J. Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

Q

Thank you very much. Dave, maybe if you could add a little more color in terms of the supply chain issues. You mentioned that it wasn't so much Seagate but your customers. Is there a possibility that there could be a large ramp-up when some of these supply chain issues abate where you'll have to ramp up to meet, I guess, pent-up customer demand? And how do you look at your current capacity in meeting that kind of potential surge down the road?

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Thanks, Patrick. Yeah, a couple things on that point. We talk to the customers deeply, trying to understand their forecasts and things like that for what they need. So we know there is pent-up demand out there. We always – all of us, the customers and ourselves, are always asking, is it double booking or something like that. But the way the orders are getting filled today when the supply does break free, I'm confident that, there is some snowplowed pent-up demand there coming. So that's good trend.

It doesn't mean that it'll be solved overnight. It's not one particular type. Like everyone talks about semiconductor parts being the gate or something like that, I mean, from what we see, there's small piece parts, passives. There's – even sheet metal. I mean, a lot of it comes down to whether people can get people into factories, whether suppliers can get people into factories to build all the parts, and that's where the shutdown start having some problems, but – are creating some problems just like the front end of the pandemic.

I do think it's going to abate a little bit quicker this time. And so we'll see. We're working with the customers. We are also building up a little bit of inventory right now. And so we have inventory to answer the call for them. We're kind of happy with our balance of supply and demand today and happy to go into the back half of the year, but we do have a little bit of extra inventory should the customers need it.

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

We are ramping the 20 terabyte very, very rapidly. And as we said before, we will move an important volume in the June quarter, but we are still ramping production, so that we will have even higher volume for September and December.

**Patrick J. Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

Q

Great. That's helpful. And maybe as my follow-up question for you, Gianluca, in terms of gross margins, I know there are a lot of moving pieces in terms of pricing, capacity drives. But maybe just focusing on the cost front, are freight and logistics costs the largest, I guess, headwind that is facing gross margins, or are there other costs that are having a bigger impact at least in the near term?

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

I would say in the near term, for sure, freight and logistic is a major item. We also had some of the component costs that are increasing, not at the level of inflation, but they are increasing a little bit compared to what was maybe in September quarter and December quarter last year. And now we are taking our action to improve our efficiency internally, to move our mix as much as we can to higher capacity drive, and some of the pricing actions we discussed before. So we think already in the June quarter, we will have a better gross margin and operating margin.

**Patrick J. Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

Q

Great. Thank you.

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Thank you.

**Operator:** The next question comes from Krish Sankar from Cowen. Please go ahead.

Q

Hey, hello, guys. This is Eddy for Krish. Congrats on strong results and challenging environment. I had a question on gross margin. I'm not asking for second half, but it seems like June implies improvement in gross margin. And the way I'm thinking about it is if video comes back and 20-terabyte continues to ramp, we should see improvement in second half for gross margin. Is it the right way to think about it? Thank you.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. Thanks, Eddy. It is. We – to first order, supply and demand being balanced is the thing that affects it the most. To the extent that we can ramp the new programs and sell those, I think – and they're yielding well and the scrap is low and everything else, which I'm very happy with, I think that's the best way to address the market.

The 20-terabyte high volume that we talked about in the back half of the year will certainly be a great product from a margin perspective. But even these mid-cap cost optimized drives that we've launched in the last six months, those are really hitting their stride as well. So I think we've got a good portfolio to go forward. When all the demand comes back, to Patrick's question, right, we've got a good portfolio to go forward. Factories will be full, so the margin should improve.

**Operator:** The next question comes from Steven Fox from Fox Advisors LLC. Please go ahead.

**Steven B. Fox***Analyst, Fox Advisors LLC*

Q

Hi. Good morning. Two questions, if I could. First of all, can you just be a little bit more specific on your expectations for how the lockdowns in China impact the business relative – in the June quarter relative to where we're at right now? I'm just wondering what you're factoring in there.

And then secondly, if I look at the margin guidance for the June quarter, it looks like the operating margins, call it, roughly flat on slight decline in sales on a year-over-year basis. Can you talk about the puts and takes versus a year ago in terms of the flat margins, what you're dealing with now versus a year ago and how the mix is helping, et cetera? Thanks.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Yeah. I would say for the COVID, we expect, unfortunately, this situation to last probably through big – major part of the quarter, maybe the entire quarter. As we have seen in the last two and a half year, those things usually don't go away very quickly. So this is part of what we guided.

Then in terms of gross margin, as I said before, we have items that we can work on in order to improve our profitability also in the short term. And despite those cost increases that we are experiencing right now, we are very confident with demand on our 20 terabyte. I would say this is probably the major driver for our improvement in gross margin in the short term. And as you know, every quarter, we are able to improve our internal efficiency and get a little bit of the cost down, despite all the external cost that we need to offset.

**Steven B. Fox***Analyst, Fox Advisors LLC*

Q

Great. That's helpful. Thank you.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Thank you.

**Operator:** The next question comes from Erik Woodring from Morgan Stanley. Please go ahead.

**Erik W. Woodring***Analyst, Morgan Stanley & Co. LLC*

Q

Great. Thank you for taking my question. Maybe just to start, Dave, do you mind just providing a few more details just on some of the pricing actions you guys are taking in this market and ways that you can offset some of this component cost inflation?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. Obviously, Erik, there's a distribution channel worldwide. As we – that's the stuff that we can move fastest. Things that we have, for example, long-term agreements or key OEM relationships where we're trying to drive predictability, that stuff moves slower.

Sometimes, the inflationary pressures come really quickly. Sometimes, there are things that are affecting everyone. And so I think everyone gets it. We deal with procurement people who are experts themselves. They know what's going on. They know what we're suffering with. Again, our first answer isn't pricing. It's usually to try to help each other for ways around it. But ultimately, we have to get paid for what we do. So I mean, there's different time horizons, I guess, is the best way to say it for what we can go implement.

---

**Erik W. Woodring***Analyst, Morgan Stanley & Co. LLC*

Q

Okay. Thanks. And then maybe just as a follow-up, to get back to one of the questions about legacy markets earlier. Maybe can you just dig one level deeper and try to parse out maybe how you guys are thinking about the supply challenges that your customers are going through versus any kind of impact to demand that they might be seeing, that might compound those supply challenges, or more than offset those supply challenges? And that's it from me. Thanks.

---

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. Not too much on legacy. I think it does – there's some interesting trends going on. I won't opine on this too much other than to say that, as I talk to different customers, there are some people who are being forced through product transitions. And sometimes, that's a way to alleviate, ultimately, the supply challenge. But you go through a product transition to the new product to make it more efficient, so that people can get more parts. But then your legacy stuff, if you will, goes end of life, and that becomes a challenge for you as well because you need some of the legacy stuff to be able to make your product.

So it's a complicated world in – when supply is behind demand on all of these parts because people are trying to get you more parts, but they're taking it through these product transitions, and not everybody goes at the same speed through them. And we don't really have that issue too much in the HDD business, but we see it a lot outside of us. So we're mindful of that and we'll have to work with the customers on it.

---

**Erik W. Woodring***Analyst, Morgan Stanley & Co. LLC*

Q

Great. Thank you.

---

**Operator:** The next question comes from Aaron Rakers from Wells Fargo. Please go ahead.

---

**Aaron Rakers***Analyst, Wells Fargo Securities LLC*

Q

Yeah. Hey, guys. Thanks for taking my questions. I wanted to go back to Wamsi's question at the beginning around kind of the full calendar year. I can appreciate that there's a lot of moving parts and you don't want to give full year guidance. But I guess, my simple question is, do you think this calendar year, you can grow revenue?

And the reason I'm asking is that, even on a flattish revenue basis, it would imply seemingly healthier ramp into the second half of the calendar year than we've seen over the last couple of years. So I'm just kind of – any thoughts around that? I know you talk about visibility on the cloud side into the second half being strong. Again, can you grow this calendar year?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Sure. I'll give my take on it, Aaron, and then I'll hand it over to Gianluca. I think it all comes down to what are the dynamics that we're seeing tactically in the channels right now. I mean, I think the demand is out there. And certainly, from the cloud side, the demand is ultimately out there. And then, even on the enterprise side on the nearline enterprise, if you will, there's demand. People kitting the entire – getting the entire kit of parts is probably more of the issue. Like we referred to earlier, we're actually snowplowing some of that demand right now.

To the extent we can get all of that, we've got a great product set coming as well. So we're really happy about that. We do think there's going to be revenue growth in the back half of the year. But when you get into these compares, I think it just gets a little too early, given exactly what we're going through right now.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Yeah. I'll say, if you just look at demand, demand could drive revenue above what we did in calendar 2021. The point is, how much of that demand we can really serve. And right now, we don't have the full visibility to give you a clear indication. So we said before, we are confident on demand. We are confident that the second part of the calendar year will be strong. But again, we are not, today, in a position to really quantify that because we don't know how much we can serve.

**Aaron Rakers***Analyst, Wells Fargo Securities LLC*

Q

Yeah. And I guess, as a quick follow-up, and I appreciate that. Thinking about gross margin, you've said for the last couple of quarters, HDD gross margin's been solidly in your 30% to 33% range. How do we think about the trajectory of the non-HDD gross margin as we look forward?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. It's actually an interesting question. We think that we were definitely snowplowing some demand on the system side. We made reference to that. That's where we had some of our component challenges that we couldn't get enough components. And so, had we probably been able to attain that, I think the margins would have been higher and, I'll say, at the same level as the HDD gross margins per our plans. But if it were to drop too much, then we might not do that business.

But we think that, on the systems side there's quite a bit of opportunity. And the rest of the stuff in the consumer markets and SSD, we're opportunistic, and we take advantage of the current environment, use our brand well. So I would say, think about it as flat. We were just challenged because we couldn't get enough parts last quarter.

**Aaron Rakers***Analyst, Wells Fargo Securities LLC*

Q

Thank you.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

Yeah. This quarter in SSD, we also had some component cost increase, so we didn't have a particularly high gross margin. So this is also impacting our total gross margin for the quarter. But on the hard disk side, as you said, we were well into the range.

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah, good.

**Aaron Rakers***Analyst, Wells Fargo Securities LLC*

Q

Yeah.

**Operator:** The next question comes from C.J. Muse from Evercore. Please go ahead.

**C J. Muse***Analyst, Evercore ISI*

Q

Yeah. Good morning. Thank you for taking the question. Another gross margin question implied in your guide looks like roughly 75 to 100 bp increase in gross margins on flattish revenue. So curious, what the key kind of positive drivers are there? Is that entirely higher pricing, or is there a little kiss from VIA mix, or is there something else in there that we should be thinking of?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

I think it's largely mix. Not just VIA mix, but VIA mix is a little bit of it. I mean, we do see that market starting to recover. Like I said, there's a pent-up demand there that ultimately gets served if people find the right components. But 20 terabytes, the mid-cap drives that we talked about – cost optimized mid-cap drives, those are ramping as well. I'm happy with the yields, the factories are full. Those are the things that really help us drive the margins.

**C J. Muse***Analyst, Evercore ISI*

Q

Very helpful. And I guess as my follow-up, is there a way to put a number on what kind of demand from the VIA side has been pushed out to the second half; and if you assume there's no demand destruction, what kind of incremental revenues that could look like?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Tough Question. I don't know that we've ever really thought of it like that. But I do think that – I'll let Gianluca answer here. What I would say, C.J., is that, at a high level there's big customers and small customers. The small customers in the channel are the ones that are the most disrupted. The business is being serviced around the world. VIA business is being serviced by individual operators, I call it a white-van business sometimes and so – and that's a fairly profitable set of channels for us. So I think that's what we're going to have to watch the recovery of in order to predict how it goes.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

I'm trying to quantify. Last quarter, we said we were expecting fiscal 2022 to be between 12% and 14% higher than fiscal 2021. And right now, based on what we guided, we'll be probably around between 10% and 11%. So, the delta is mainly the VIA market decline. So this is what is probably pushing out, more or less.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. It's not just the one big customer or two big customers, obviously. The diverse channels are the ones that are really being impacted, I think.

**C J. Muse**

*Analyst, Evercore ISI*

Q

Very helpful. Thank you.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Thanks.

**Operator:** The next question comes from Kevin Cassidy from Rosenblatt Securities. Please go ahead.

**Kevin Cassidy**

*Analyst, Rosenblatt Securities, Inc.*

Q

Yeah. Thanks for taking my question. Maybe my question's around the same. The inventory builds that you saw this quarter, was that VIA products, did you say? And also, how fungible is your manufacturing can you move from VIA to more of the nearline products?

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. Thanks, Kevin. There is some VIA product that is actually nearline product, yes. And to the extent that we're ramping those cost optimized mid-cap to satisfy those markets, it's the same product exactly.

Not too much – most of what we're talking about as far as inventory WIP and raw materials is really driving 20 terabyte transitions, and still selling what we had on the older products, but making sure we wind up for this big ramp that we've got on 20s. So that's the big play there.

There's some small VIA and there's some small even legacy. Just because the demand is down a little bit, we keep the factories going and then we repurpose the factories towards more mass capacity later. We've been on that trajectory of transition, if you will, for the last five years.

**Kevin Cassidy**

*Analyst, Rosenblatt Securities, Inc.*

Q

Right. And maybe just what visibility do you have? Like, I guess, what lead time are you giving your customers if they place an order today?

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Totally depends on the product, of course, but – one of the reasons why we're driving the discussions that we are with the cloud is because their volume is so high, not just in the number of drives, but in heads of media and things like that. We want to make sure we have the right thing for their transition. So those visibilities, if you will, the lead times could be six months. That's from wafer starts to drive out, it's longer than that for some of these big cloud drives.

Other markets, we may have – we may want six or eight week visibility, but not too much of our business is, I'll call it, highly transactional at the end like it used to be, but if that helps you, different markets are different, the cloud being the longest

---

**Kevin Cassidy**

*Analyst, Rosenblatt Securities, Inc.*

Q

Okay, great. Thank you.

---

**Operator:** Your next question comes from Ananda Baruah from Loop Capital. Please go ahead.

---

**Ananda Baruah**

*Analyst, Loop Capital Markets LLC*

Q

Hey, thanks, guys for taking the question. Yeah, a couple if I could. Dave, what's your guys' view on this cloud demand, this cloud cycle going into calendar year 2023 at this point? And then I have a quick related follow-up. Thanks.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. I think there's a lot – it is hard to manage data centers at high volume, I think, like a lot of people are learning in the world. So as I think about some of the smaller providers around the world, it's not easy to ramp and scale and things like that. So there are all kinds of distractions, especially with the supply chain things that are going on in the world. The bigger you get, the more you have to take offline some older stuff and refurb and upgrade. And so it becomes an enormous operational challenge. And I really appreciate how hard that is for everyone to manage. And so, therefore, you hear people going through various trends.

My sense is, right now, higher capacity drives are in – a hot commodity. I think that the world will go to more – or bigger percentage of higher capacity drives in the future. I think when we talked about these utilization rates being larger than they ever have been, kind of record utilization rates in the cloud, I mean, people have really kind of squeezed as much as they could out of the existing data infrastructure. There's not a lot of drives that aren't working 24/7 or aren't full, or that kind of thing in that environment, and data just keeps growing.

So from my perspective, directly to your question, CY 2023 will continue to grow in exabytes. And we're on a trajectory here in five-plus years to double the revenue out of mass capacity. And our products are staged really well for that. So the discussions – the long-term discussions that we're having with everybody, again, everyone going through temporal problems right now in supply chain, but the long-term discussions are quite favorable for us.

---

**Ananda Baruah**

*Analyst, Loop Capital Markets LLC*

Q

That's super helpful. And I guess, a follow-on to that is you guys have talked – you did some – sort of had some conversation last year about increasing – so the number of what you consider to be sort of your larger cloud-

related customers, I think to 15 or so from 10 or so. Are you seeing – like what's going on with supply chain and macro, et cetera, are you seeing any impact to the pacing of the development of those customers?

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. You read that – if you read that into my last answer, there's definitely some of the smaller players that are trying to grow more quickly, that are having their own issues with supply chain. And that's a function of maybe just experience so far. They have aspirational goals to grow much bigger. We can try to help them, but they are going through various supply chain issues.

And we think some of that will abate over time. And some of it, actually, frankly, they'll pick architectures that are much more common out there in the world versus trying to optimize their own architecture as well to satisfy their application set, just because of the supply chain problem. So that will probably help the supply situation as well.

**Ananda Baruah**

*Analyst, Loop Capital Markets LLC*

Q

All right. That's really helpful. Thanks a lot.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Thanks, Ananda

**Operator:** The next question comes from Jim Suva from Citigroup. Please go ahead.

**Jim Suva**

*Analyst, Citigroup Global Markets, Inc.*

Q

Thank you. You've been very clear about the challenges in China on video imaging and also the visibility you have in the second half of the year. The question I have is, is there a risk that if – and who knows, but if COVID continues to remain an issue and certain locations have kind of a zero tolerance policy, that this actually could not come back in the second half of the year; or is there – you have visibility that, regardless of the demand for the video imaging in Asia, will come back in the second half of the year? I'm just trying to understand that a little bit. Thank you.

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Right. I think, Jim, it's too early to tell, but there is uncertainty, yeah. And you can tell that in our comments. Talking to our customers, the demand is out there. They continue to innovate on feature sets and smart city feature sets and surveillance feature sets, and these things are needed around the world, I mean, to make people safer and to drive all kinds of efficiencies. I've had some great conversations about consumer behavior and getting some efficiencies out of that, that would help everybody's margins. And so there's all these ideas.

Usually, that comes with installing new NVR, DVR boxes at the edge because that's where a lot of the analytics are done. It's just, right now, I think these channels are fairly disrupted and worldwide. And the VARs are – the integrators are not willing to stick their necks out too far because they don't know exactly what's going to happen next. And I do think that COVID is a significant part of that, especially in China. I think that once that abates, then the new feature sets will be in demand, and I think we'll start to see it come back.

**Gianluca Romano***Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

In the last two and a half years, we have lived with a lot of uncertainties. So we think we have managed those fairly well. But of course, depends on the magnitude and we don't know what will happen next month and next quarter. But as Dave said, we expect that to start to improve hopefully soon and that demand to come back quickly.

**Jim Suva***Analyst, Citigroup Global Markets, Inc.*

Q

Great. Thank you.

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Thanks, Jim.

**Operator:** The next question comes from Mehdi Hosseini from SEI. Please go ahead.

**Mehdi Hosseini***Analyst, Susquehanna Financial Group LLLP*

Q

Thank you. It's actually SIG. One quick follow-up, I'm just curious, how do you guys forecast nearline demand for more than one quarter and specifically for North American customers?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Well, we – Mehdi, I think we've talked about quite a bit of our LTAs that we have. It's not really even forecast at some level. It's strong discussions that we're having with customers. And when you talk – start talking in the millions and millions of units, and staging the right product for what they need and filling hubs, even a 10% error is just something that we actually put in the hubs around. So we're not even forecasting. It's more co-planning, I would say, the co-planning exercises that we're doing now.

**Mehdi Hosseini***Analyst, Susquehanna Financial Group LLLP*

Q

Got you. Thank you.

**Operator:** The next question comes from Mark Miller from the Benchmark Company. Please go ahead.

**Mark Miller***Analyst, The Benchmark Co. LLC*

Q

Thank you for taking my questions. First question, can you give us an update on HAMR? And then the follow-up question is, you're talking about being at the low end of your capital spending for fiscal 2022, do you anticipate you'll have to add component production capacity in fiscal 2023?

**William David Mosley***Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Thanks, Mark. So yeah, HAMR, we started talking a couple of quarters ago about being in product development. So if you've watched our companies long enough, you know what that means. We're kind of in the final throes of development. Doesn't mean that the product's done by any stretch of the imagination, but confidence is pretty high.

The gains that have been made in HAMR and reliability testing have been fantastically – I mean, to the point where we have productizable components right now. We've got to get the yields up. We got to solve all the other problems. It's not just about heat-assisted magnetic recording, it's about all the other things that have to come together in a 30-plus terabyte drive.

But we have confidence. We've been staging for it for quite a long time. We're very communicative with our customers on this because this is a jump that, frankly, they want really badly because that helps their TCO proposition. And so – and there's a whole host of new features that come out on some other schedule that we're working with them on as well. So we're in the throes of product development, customer communications and everything else. And we'll keep you posted on that. It's going quite well.

---

**Gianluca Romano**

*Chief Financial Officer & Executive Vice President, Seagate Technology Holdings Plc*

A

I think the second question was on CapEx I think. Yeah. So for fiscal 2022, we are at the low – in the low part of the 4% to 6% range of revenue, of course. I – no, we don't guide fiscal 2023 today, but I don't see any reason why we should be out of that range also for next year.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah. And if your implication, Mark, was about components around HAMR, I think we've been planning for that for quite some time. So the tools that we're using that we have to buy are HAMR-compatible to the first order, and we know how to integrate those.

---

**Mark Miller**

*Analyst, The Benchmark Co. LLC*

Q

I was also thinking about the ramp of 20 terabyte.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Yeah, yeah. It's the same tool set, yeah.

---

**Mark Miller**

*Analyst, The Benchmark Co. LLC*

Q

Okay. Thank you.

---

**William David Mosley**

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

A

Okay.

---

**Operator:** There are no more questions in the queue. This concludes our question-and-answer session. I would like to turn the conference back over to management for any closing remarks.

## William David Mosley

*Chief Executive Officer & Director, Seagate Technology Holdings Plc*

Yeah. Thanks, Jason. In summary, long-term growth drivers for mass capacity infrastructure haven't changed, and it's all underpinning growing demand in the cloud and the edge. It's all about data. Seagate's strong operational execution and product roadmap position, our technology, we're really well positioned to capture these opportunities, and we'll expand profitability, enhance value for all of our stakeholders.

I'd like to thank our employees again for their outstanding efforts in these tough times and thank our customers, suppliers and investors for their continued support. Thanks for joining us.

---

**Operator:** Conference has now concluded. Thank you for attending today's presentation. You may now disconnect.

### 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.