

Amazon.com, Inc. (NASDAQ:[AMZN](#)) Q2 2023 Earnings Conference Call August 3, 2023 5:30 PM ET

### **Company Participants**

Dave Fildes - Director, IR  
Andrew Jassy - President, CEO & Director  
Brian Olsavsky - SVP & CFO

### **Conference Call Participants**

Colin Sebastian - Robert W. Baird & Co.  
Mark Mahaney - Evercore ISI  
Brent Thill - Jefferies  
Eric Sheridan - Goldman Sachs Group  
Brian Nowak - Morgan Stanley  
Douglas Anmuth - JPMorgan Chase & Co.

### **Operator**

Good day, everyone, and welcome to the Amazon.com Quarter Two 2023 Financial Results Teleconference. [Operator Instructions].

For opening remarks, I will be turning the call over to the Vice President of Investor Relations, Dave Fildes. Thank you, sir. Please go ahead.

### **Dave Fildes**

Hello, and welcome to our Q2 2023 financial results conference call. Joining us today to answer your questions is Andy Jassy, our CEO; and Brian Olsavsky, our CFO. As you listen to today's conference call, we encourage you to have our press release in front of you, which includes our financial results as well as metrics and commentary on the quarter. Please note, unless otherwise stated, all comparisons in this call will be against our results for the comparable period of 2022.

Our comments and responses to your questions reflect management's views as of today, August 3, 2023 only and will include forward-looking statements. Actual results may differ materially. Additional information about factors that could potentially impact our financial results is included in today's press release and our filings with the SEC, including our most recent annual report on Form 10-K and subsequent filings.

During this call, we may discuss certain non-GAAP financial measures. In our press release, slides accompanying this webcast and our filings with the SEC, each of which is posted on our IR website, you will find additional disclosures regarding these non-GAAP measures, including reconciliations of these measures with comparable GAAP measures. Our guidance incorporates

the order trends that we've seen to date and what we believe today to be appropriate assumptions.

Our results are inherently unpredictable and may be materially affected by many factors, including fluctuations in foreign exchange rates, changes in global economic and geopolitical conditions and customer demand and spending, including the impact of recessionary fears, inflation, interest rates, regional labor market constraints, world events, the rate of growth of the Internet, online commerce and cloud services, and the various factors detailed in our filings with the SEC.

Our guidance assumes, among other things, that we don't conclude any additional business acquisitions, restructurings or legal settlements. It's not possible to accurately predict demand for our goods and services, and therefore, our actual results could differ materially from our guidance. And now I'll turn the call over to Andy.

### **Andrew Jassy**

Thank you, Dave. Good afternoon, everyone, and thanks for joining us. Today, we are reporting \$134.4 billion in revenue and \$7.7 billion in operating income, both of which exceeded the top end of our guidance ranges. We're encouraged by the progress we're making on several key priorities, namely: lowering our cost to serve in our stores business; continuing to innovate on and improve our various customer experiences; and building new customer experiences that can meaningfully change what's possible for customers in our business long term.

I'll start with our ongoing effort to lower our cost to serve in our stores' fulfillment network. Q2 saw another meaningful improvement in this area as we have steadily made progress for the last several quarters. Central to our efforts has been the decision to transition our stores' fulfillment and transportation network from one national network in the United States to a series of eight separate regions serving smaller geographic areas. We keep a broad selection of inventory in each region, making it faster and less expensive to get those products to customers.

Regionalization is working and has delivered a 20% reduction in number of touches for our delivered package, a 19% reduction in miles traveled to deliver packages to customers and more than 1,000 basis point increase in deliveries fulfilled within region, which is now at 76%. This is a lot of progress. Sometimes I hear people make the argument that Amazon is chasing faster speed, while driving its costs higher and where it doesn't matter much to customers. This argument is incorrect.

There are two things to note. First, customers care a lot about faster delivery. We have a lot of data that shows when we make faster delivery promises on a detail page, customers purchase more often, not just a little higher, meaningfully higher. It's also true that when customers know they can get their items really quickly, it changes their consideration of using us for future purchases too.

Second, when shipments come from fulfillment centers that are closer to customers, they travel shorter distances, which cost less in transportation, gets there faster and is better for the environment. There's a lot of goodness in that equation. This ability to have shipments closer to customers is the result of a lot of work and invention on the regionalization side, placement logic and local in-stock algorithms. It's also driven by our development and expansion of same-day fulfillment facilities, which is our fastest fulfillment mechanism and one of our least expensive, too.

Our same-day facilities are located in the largest metro areas around the U.S., so our top-moving 100,000 SKUs, but also cover millions of other SKUs from nearby fulfillment centers that inject selection into these same-day facilities and have a design that streamlines getting items from order to being ready for delivery in as little as 11 minutes. The experience has been so positive for customers in our business that we're planning to double the number of these facilities. We believe that we are far from the law of diminishing returns and improving speed for customers.

While we're seeing strong early results from this regionalization effort, we still see several ways in which we can be more efficient in this structure and we believe will improve productivity further. We've also reevaluated virtually every part of our fulfillment network this past year and see additional structural changes we can make that provide future upside. We're excited about this cost to serve improvement, but also remain maniacally focused on making customers' lives easier and better every day and relentlessly inventing to make it so. This means constantly trying to improve experiences that we can deliver to customers short and long term. This customer experience work is at the heart of what we do every day across every one of our businesses.

And I can spend an hour on this call detailing various examples across the teams. For today, I'll just focus a bit on our stores and AWS businesses. For stores, our priorities continue to be providing customers with great selection, low prices and convenience. And as we've discussed, we've been especially focused on providing even faster delivery speeds. Our speed of delivery has never been faster. In this last quarter, across the top 60 largest U.S. metro areas, more than half of Prime members' orders arrived at the same day or next day. So far this year, we've delivered more than 1.8 billion units to U.S. Prime members the same or next day, nearly 4x what we delivered at those speeds by this point in 2019.

Lowering our cost to serve allows us not only to invest in these speed improvements, but also add more selection at lower price points. In particular, we're growing our selection in everyday essentials, enabling customers to avoid going out to get these items and both increasing our basket sizes and the frequency with which customers choose to shop with us. We now have more than 300 million items available with U.S. Prime free shipping, including tens of millions of items with free same-day and 1-day delivery.

We're continuing to focus on providing great value with tens of millions of deals that help customers stretch their dollar a little more. For instance, in Q2 of '23, we offered customers 144% more deals and coupons than we did in Q2 of 2022. Prime Day was similar. Amazon

offered more deals than any past Prime Day event with a wide selection across millions of products. Prime members purchased more than 375 million items worldwide and saved more than \$2.5 billion across the Amazon store, helping make it the biggest Prime Day ever.

Next, a few words about AWS. AWS remains the clear cloud infrastructure leader with a significant leadership position with respect to number of customers, size of partner ecosystem, breadth of functionality and the strongest operational performance. These are important factors for why AWS has grown the way it has over the last several years and for why AWS has almost doubled the revenue of any other provider. I've talked to many AWS customers over the years and continue to do so. And while all these factors I mentioned have been big drivers of the business' success, AWS customers tell us that as importantly, they care about the very different customer focus and orientation in AWS may see elsewhere.

As the economy has been uncertain over the last year, AWS customers have needed assistance cost optimizing to withstand this challenging time and reallocate spend to newer initiatives that better drive growth. We've proactively helped customers do this. And while customers have continued to optimize during the second quarter, we've started seeing more customers shift their focus towards driving innovation and bringing new workloads to the cloud. As a result, we've seen AWS' revenue growth rate stabilize during Q2 where we reported 12% year-over-year growth.

The AWS team continues to innovate and change what's possible for customers at a rapid clip. You can see across the array of AWS product categories where AWS leads in compute, networking, storage, database, data solutions and machine learning, among other areas, and the continued invention and delivery in these areas is pretty unusual. For instance, a few years ago, we heard consistently from customers that they wanted to find more price performance ways to do generalized compute. And to enable that, we realized that we needed to rethink things all the way down to the silicon and set out to design our own general purpose CPU chips.

Today, more than 50,000 customers use AWS' Graviton chips and AWS Compute instances, including 98 of our top 100 Amazon EC2 customers, and these chips have about 40% better price performance than other leading x86 processors. The same sort of reimagining is happening in generative AI right now. Generative AI has captured people's imagination, but most people are talking about the application layer, specifically what OpenAI has done with ChatGPT. It's important to remember that we're in the very early days of the adoption and success of generative AI, and that consumer applications is only one layer of the opportunity.

We think of large language models in generative AI as having 3 key layers, all of which are very large in our opinion and all of which AWS is investing heavily in. At the lowest layer is the compute required to train foundational models and do inference or make predictions. Customers are excited by Amazon EC2 P5 instances powered by NVIDIA H100 GPUs to train large models and develop generative AI applications. However, to date, there's only been one viable option in the market for everybody and supply has been scarce.

That, along with the chip expertise we've built over the last several years, prompted us to start working several years ago on our own custom AI chips for training called Trainium and inference called Inferentia that are on their second versions already and are a very appealing price performance option for customers building and running large language models. We're optimistic that a lot of large language model training and inference will be run on AWS' Trainium and Inferentia chips in the future.

We think of the middle layer as being large language models as a service. Stepping back for a second, to develop these large language models, it takes billions of dollars and multiple years to develop. Most companies tell us that they don't want to consume that resource building themselves. Rather, they want access to those large language models, want to customize them with their own data without leaking their proprietary data into the general model, have all the security, privacy and platform features in AWS work with this new enhanced model and then have it all wrapped in a managed service.

This is what our service Bedrock does and offers customers all of these aforementioned capabilities with not just one large language model but with access to models from multiple leading large language model companies like Anthropic, Stability AI, AI21 Labs, Cohere and Amazon's own developed large language models called Titan. Customers, including Bridgewater Associates, Coda, Lonely Planet, Omnicom, 3M, Ryanair, Showpad and Travelers are using Amazon Bedrock to create generative AI application. And we just recently announced new capabilities from Bedrock, including new models from Cohere, Anthropic's Claude 2 and Stability AI's Stable Diffusion XL 1.0 as well as agents for Amazon Bedrock that allow customers to create conversational agents to deliver personalized up-to-date answers based on their proprietary data and to execute actions.

If you think about these first 2 layers I've talked about, what we're doing is democratizing access to generative AI, lowering the cost of training and running models, enabling access to large language model of choice instead of there only being one option, making it simpler for companies of all sizes and technical acumen to customize their own large language model and build generative AI applications in a secure and enterprise-grade fashion, these are all part of making generative AI accessible to everybody and very much what AWS has been doing for technology infrastructure over the last 17 years.

Then that top layer is where a lot of the publicity and attention have focused, and these are the actual applications that run on top of these large language models. As I mentioned, ChatGPT is an example. We believe one of the early compelling generative AI applications is a coding companion. It's why we built Amazon CodeWhisperer, an AI-powered coding companion, which recommends code snippets directly in the code editor, accelerating developer productivity as they code. It's off to a very strong start and changes the game with respect to developer productivity.

Inside Amazon, every one of our teams is working on building generative AI applications that reinvent and enhance their customers' experience. But while we will build a number of these applications ourselves, most will be built by other companies, and we're optimistic that the

largest number of these will be built on AWS. Remember, the core of AI is data. People want to bring generative AI models to the data, not the other way around.

AWS not only has the broadest array of storage, database, analytics and data management services for customers, it also has more customers and data store than anybody else. Coupled with providing customers with unmatched choices at these 3 layers of the generative AI stack as well as Bedrock's enterprise-grade security that's required for enterprises to feel comfortable putting generative AI applications into production, we think AWS is poised to be customers' long-term partner of choice in generative AI.

We're also continuing to make meaningful progress in building new customer experiences that can meaningfully change what's possible for customers in our business long term. Amazon Business is one of our fastest-growing offerings with a \$35 billion annual gross sales run rate. And the team is working hard to further build out the selection, value, convenience and features that business customers need. Buy with Prime is continuing to show a lot of progress. Merchants in early trials who use Buy with Prime saw their shopper conversion increased by 25% on average, which makes a real difference to their business. Also, merchants who participate in Prime Day activities, in aggregate, experienced a 10x increase in daily Buy with Prime orders during the sales event period versus the month before we announced Prime Day.

It's frankly only been a short amount of time that we've decided to invest significantly in the health care market segment. A lot of what we tried before were smaller experiments. But we're pleased with Amazon Pharmacy doubling its active customers in the past year, and we're pleased with the response to RxPass, which enables Prime members to receive all of their eligible generic medications for just \$5 a month and have them delivered free to their door. One Medical has been part of Amazon for just a few months now and we're encouraged by what we're seeing there, too.

Our grocery business continues to grow. We already have a very large business in nontemperature-controlled areas like consumables, pet food, beauty and canned goods that continues to grow as we keep increasing speed and lowering our cost to serve, which allows us to sell more items more cost effectively. Whole Foods continues to lead the organic grocery space, is growing at a healthy clip and has meaningfully improved its profitability in the last year. We're pleased with what we're seeing with Whole Foods. And as I've shared before, we're working on new formats in our mass physical store offering, Amazon Fresh, having significantly improved the number of the key business inputs and just rolled out new concepts in stores.

We also see substantial innovation and progress in other areas like Kuiper, Zoox and Alexa. We're still relatively early in many of our investments with technology inventions that are changing what's possible to deliver for customers in these areas, but they're big long-term opportunities that we remain optimistic about.

Finally, I want to recognize our teams on being named 1 in LinkedIn's Top Companies to Grow your Career in the United States. It's a testament to our work to be a great employer with leading compensation benefits and upskilling opportunities. With that, I'll turn it over to Brian.

## **Brian Olsavsky**

Thank you, Andy. As Andy mentioned, we saw worldwide revenue of \$134.4 billion, an increase of 11% year-over-year and above the top end of our guidance range. We are encouraged by the strength in our reported revenue, which is another proof point that our focus on price, selection and convenience continues to resonate with customers. We continue to see healthy demand across everyday essentials and in categories like beauty and health and personal care and have seen a positive customer response to improvements in personalization and enhancements to our website and mobile app.

During the quarter, we also saw improvements in macroeconomic indicators across our North America and international segments, but continue to see customers trading down and seeking value in their purchases. Delivery speed has been a key area of focus over the last several quarters, and we reached record levels during Q2. Prime members love the faster ship speeds and are shopping more often. Advertising revenue remained strong, up 22% year-over-year. Our performance-based advertising offerings continue to be the largest contributor to our growth.

Our teams worked to increase the relevancy of the ads we show to our customers by leveraging machine learning and improve our ability to measure the return on advertising spend for brands. Third-party unit mix increased to 60% during the quarter, the highest level we've ever seen, and we're continuing to see good growth in the number of sellers and the unit sold per seller. We're making steady progress on improving our worldwide stores profitability.

Since North America segment operating margins bottomed out in Q1 of 2022, we have seen 5 consecutive quarters of improvement, with second quarter operating margin of 3.9%. This is an improvement of 620 basis points over these past 5 quarters. One of the largest drivers of this operating income improvement in the stores business has been reducing our cost to serve, with shipping costs and fulfillment costs continuing to grow at a slower pace than our unit growth.

Most recently, regionalization is an important contributor. Faster delivery speed from better network connectivity and better inventory placement means less miles traveled and fewer touches, resulting in less cost. And while we are pleased with the progress we have made, we see more opportunity to drive improved cost efficiencies going forward.

Moving to the international segment. Since our operating margin loss bottomed out in Q3 of last year, we have seen 3 consecutive quarters of improvement, with a second quarter margin loss of negative 3%. This is an improvement of 590 basis points over the last 3 quarters. This segment also includes our emerging countries. It is important to remember how early we are in some of these marketplaces. We've launched more than 10 countries in the past 6 years and are always evaluating our customer experience as well as our path to profitability, and we like the path we're on. As a reminder, it took us 9 years to reach profitability in the United States. In addition, across our North America and international results, inflation headwinds also continue to ease, most notably in fuel prices, linehaul rates, ocean and rail rates.

Moving to AWS. Year-over-year revenue growth was 12%, with growth rates stabilizing during Q2. We are encouraged by the strength of our customer pipeline and believe having a large diverse customer base that is mostly cost optimized sets us up well for future growth. On a trailing 12-month basis, free cash flow was positive and improved for the fourth sequential quarter. Our financial focus remains on driving long-term sustainable free cash flows. The largest driver of the recent improvement in free cash flow is our increased operating income, most notably in the North America and international segments where, as I said, we've made meaningful improvement in our fulfillment network productivity and operating leverage and benefited from moderating inflationary pressures.

We've also seen improvements in our working capital contributions to free cash flow. Over the past couple of years, working capital hasn't been as efficient as we've held higher weeks of cover of inventory in the face of supply chain disruptions. Most recently, as these disruptions continue to ease, we are improving our inventory efficiency, resulting in improvements in our working capital. We will remain focused on continued free cash flow improvement moving forward.

Next, let's turn to our capital investments. We define our capital investments as a combination of capital expenditures plus equipment finance leases. These investments were \$54 billion for the trailing 12-month period ended June 30, down from \$61 billion in the comparable prior year period. Looking ahead to the full year 2023, we expect capital investments to be slightly more than \$50 billion compared to \$59 billion in 2022. We expect fulfillment and transportation CapEx to be down year-over-year, partially offset by increased infrastructure CapEx to support growth of our AWS business, including additional investments related to generative AI and large language model efforts.

With that, let's move on to your questions.

## **Question-and-Answer Session**

### **Operator**

[Operator Instructions]. And our first question comes from the line of Colin Sebastian with Baird.

### **Colin Sebastian**

I guess first on the fulfillment efficiency. Would be curious if you could give us a sense for how much of that optimization in the network with unit economics may have already been achieved in these numbers versus how much more you think is left to go. And related to that, I'm curious if you can leverage this reformulated network to help out with the grocery expansion. Or will that be limited to the stores and the specialized automated facilities you're building out?

### **Brian Olsavsky**

I'll take that first one. So on fulfillment efficiency, we're encouraged again by what we're seeing with regionalization and also the efforts to control our cost structure and the -- some of the



inflationary pressures coming down. We're still in that journey, though, to reclaim the cost structure that we had previously and we consider this as a point along the road. So encouraged by some of the margin improvements we're seeing, particularly over the last 3 to 5 quarters but we're still underway. There's still a lot to be regained in our fulfillment area, and the teams are working very hard on it.

On the question of grocery, as Andy explained at different points, our grocery business has a lot of dimensions to it. Obviously, there's consumables, there's fresh goods, there's Whole Foods. The same -- sub-same-day is probably mostly impacting the first -- that pocket of the consumables and everyday essentials. And as Andy mentioned, we're able to expand our selection in those areas because our cost structure can, quite frankly, afford it when the distances of customers are shorter and the transportation costs are more fixed.

### **Andrew Jassy**

I'll just add to that, this is Andy, that I do think there's some optimization and some leverage we get from our fulfillment network. And particularly in the case of being able to inject a number of items into our same-day facilities, to increase the number of items that people can add at the last minute, even grocery items that they can get same day. And I think that you see some of that already and you'll see more of that moving forward.

And I also think that you'll see over time that we're going to be able to leverage being able to have -- people be able to pick up different items from different grocery-like options that are different grocery formats. But it's also true that we have infrastructure build-out in our grocery business that's different and optimized for the grocery business, too.

### **Operator**

Our next question comes from the line of Mark Mahaney with Evercore ISI.

### **Mark Mahaney**

I'll limit myself to one question for each of you. Amazon Business has been a couple of years since you've talked about that. It would seem like there'd be a lot more opportunities, frankly, a lot higher level of sales, bookings, whatever, that you get out of that. So Andy, just talk about like how big of a priority is that for you? And what's the growth strategy? Like how do you take that to \$100 billion?

And then on the -- Brian, on AWS, in the last 2 quarters, you provided a little bit of a look ahead into the quarter in terms of the AWS growth, given some of the commentary about moving beyond optimization and into new workloads without -- if you don't give a specific number, at least talk about the trends that you're seeing versus what you had in the second quarter.

### **Brian Olsavsky**

Yes, sure. Thanks, Mark. Let me start with that second question. So again, if we rewind to our last conference call, we had seen 16% AWS revenue growth in Q1, and the growth rates have been dropping during the quarter. And what I mentioned was that April was running about 500 basis points lower than Q1. What we've seen in the quarter is stabilization and you see the final 12% growth.

I will stop for a moment and just put that in perspective. So again, last Q2 last year, we had close to \$20 billion of revenue and we grew that \$2.4 billion. So that's -- while that is 12%, there's a lot of cost optimization dollars that came out and a lot of new workloads and new customers that went in. So there was -- on our base, it's very large numbers. And when customers start to -- that cost optimization work, they can take some of their spend down for a while as they do that, and we help them do that and been part of our DNA ever since we started AWS. So that's all good.

What we're seeing in the quarter is that those cost optimizations, while still going on, are moderating and many maybe behind us in some of our large customers. And now we're seeing more progression into new workloads, new business. So those balanced out in Q2. We're not going to give segment guidance for Q3. But what I would add is that we saw Q2 trends continue into July. So generally feel the business has stabilized, and we're looking forward to the back end of the year in the future because, as Andy said, there's a lot of new functionality coming out with -- and there's a lot of spend that will be in this area for all the great solutions that are out there for generative AI and large language models as well as machine learning solutions that we've always had for customers. So optimistic and starting to see some good traction with our customers' new volumes.

### **Andrew Jassy**

Yes. I'll just underline one point Brian made and then quickly get to the Amazon Business point. Just if you think about the AWS business being an \$88 billion revenue run rate business, to grow double digits on a business that size with the amount of cost optimizing that's been happening, to grow double digits, you have to be adding a lot of new customers and a lot of new workloads just to grow double digits.

So when I talked about last quarter how I liked a lot of the fundamentals that we were seeing in the business with respect to customer pipeline, the new workloads, the migrations happening, what the team is rolling out functionality-wise, that's kind of what I'm talking about. And as we start to see cost optimization attenuate and more of the workloads, new workloads that people took those cost optimizations and actually started to plan come to fruition, not to mention what's coming with generative AI, there's a lot of growth in front of us on AWS.

Just on your Amazon Business question, Mark, \$35 billion annual run rate for gross sales is pretty strong growth. And if you look at it year-over-year, it continues to be very strong. But I like the way you're thinking, Mark, and it's almost like you're in some of the meetings that we're in where I asked the very same question. The team is working hard to build \$100 billion-plus business over time.

And I think that the business has grown to be pretty large already, and I still think we only have a fraction of the features that we need to address more of the enterprise at this point. There's all sorts of companies ordering obviously from Amazon Business. But the bigger procurement workloads, there are certain features that you need to make them much easier in the way that companies are used to buying in those big procurements.

And so we have a lot of features that we're adding. We have a number of service pieces that we need to add really around helping on big buys, do some of the service substantiations. And so we have a lot of functionality that we're very quickly adding to the mix here. But I don't think we're close to being done growing there, and that is a very strong area of focus for our stores team and for our senior leadership team as well.

### **Operator**

And our next question comes from the line of Brent Thill with Jefferies.

### **Brent Thill**

Andy, just on AI monetization. Can you just talk to when you think you'll start to see that flow into the AWS business? Is that 2024? Do you feel like the back half, you'll start to see that as a bigger impact for the business?

### **Andrew Jassy**

Yes. Good question, Brent. What I would say is that we have had a very significant amount of business in AWS driven by machine learning and AI for several years. And you've seen that largely in the form of compute as customers have been doing a lot of machine learning training and then running their models and production on top of AWS and our compute instances. But you've also seen it in the form of the 20-plus machine learning services that we've had out there for a few years.

I think when you're talking about the big potential explosion in generative AI, which everybody is excited about, including us, I think we're in the very early stages there. We're a few steps into a marathon in my opinion. I think it's going to be transformative, and I think it's going to transform virtually every customer experience that we know. But I think it's really early. I think most companies are still figuring out how they want to approach it. They're figuring how to train models. They want to -- they don't want to build their own very large language models. They want to take other models and customize it, and services like Bedrock enable them to do so. But it's very early. And so I expect that will be very large, but it will be in the future.

### **Operator**

And the next question comes from the line of Eric Sheridan with Goldman Sachs.

### **Eric Sheridan**

Thanks for all the detail in the prepared remarks around framing some of those key issues. Andy, maybe coming back to grocery. There's been a lot of coverage in the press around your grocery initiative in the last couple of days. When you take a step back, how much do you think about solving the grocery dynamic in the business to capitalize on it the way you want? Is it an element of things you need to build and the application of capital versus elements of executing on what's already in place and sort of aligning the assets in place against the scale of the Amazon Prime household in your customer base?

**Andrew Jassy**

Yes, it's a good question. It's a little bit of both. I mean if I just step back and think about how we think about grocery, we continue to have this very big business in nonperishables, which is where a lot of the mass merchandisers started in grocery several years ago. So these are areas like consumables and canned goods and pet food and beauty and health. And as I said, it's a big business that's continuing to grow. But if you want to be able to serve more customers, which we do, and there are a whole number of reasons for that and customers want it, you have to have a strong physical presence.

We started with Whole Foods, which is the pioneer in organic grocery, it continues to be, and we really like the way Whole Foods is growing. We've made a number of really important adjustments in the business, has changed its profitability trajectory over the last year. And we really like where that's headed and we're expanding that meaningfully. But if you want to be really broad, you have to have a mass physical format. We have been working on that for several years with Amazon Fresh. And I would say that we weren't pleased with the inputs, the progress on the inputs there. And the team has worked very hard over the last year to first start on the quality of the input, and that goes towards the quality of what we already had in place.

And these are things like the right in-stock levels, the right cost structure, the right figures on things like obsolescence, just a number of the core inputs there, we just felt like we could be sharper and better. And I think that team has made up a lot of improvements. We have spent a lot of time thinking and rethinking how we want the formats to look. And we've just started rolling out some of those new formats, starting in our Chicago stores and then moving to our Southern California stores shortly thereafter. And you see added selection. You see added private brands. You see added well-known third-party brands like Krispy Kreme in coffee in the stores.

You've seen a refined decor in the stores. You see refined dash cards that keep a running tally for people so they understand where they are at the moment wherever they're shopping, as well as refined self-service checkouts. And all those things, to me, are part of an effort we're trying to pursue to have a format in our mass Amazon Fresh stores that resonate more with customers. And we're hopeful that we will find that format and that it gives us the type of results that give us confidence to want to expand more broadly.

But we won't expand unless we see that type of resonance. We're not just going to be on discipline. We're going to be thoughtful and disciplined about it. I do think also, you're starting to see across the team pulling some of the efforts together. So we have a number of different

grocery offerings that I just talked about, just having a converged shopping cart for customers, which they have obviously wanted that I think will help them quite a bit.

We're continuing to extend delivery to non-Prime customers as well. And so I think there are a number of opportunities for us over time to grow the business. We're optimistic that we'll be able to do so, but we're also being disciplined about not expanding the physical fresh stores until we have a format that we think is more resonant with customers.

### **Operator**

And our next question comes from the line of Brian Nowak with Morgan Stanley.

### **Brian Nowak**

I have two. The first one, Andy, on the last call last quarter, you talked about how you sort of talked about North America retail margins potentially getting to at or above pre-COVID levels. I think you said a margin around 4% and you're sort of talking now about investing more in grocery and expanding same-day and expanding that footprint. How should we think about sort of the forward slope of North America retail margins and sort of invest in some of these new initiatives in the retail business?

Then the second one on AI. How high of an investment priority is it for you to improve your own retail and device network through more AI investments, potentially through logistics or AI-based agents, et cetera? How large is that in the overall investment priority list?

### **Andrew Jassy**

Well, I'll start on the North America retail piece, which is again, I'll just remind that we're not going to expand the number of fresh stores in a very significant way until we believe we have something that is resonant with customers and that we're going to like the return on invested capital. So that to me, I'm hopeful we're going to find that but we won't until we do.

I think as it relates to same-day facilities, we actually think that's going to be very positive for the business. It is -- as I mentioned in my opening remarks, it is one of our most cost-effective mechanisms and fulfillment vehicles with respect not just to getting it there to customers quickly, but being fast, in part because those facilities, they're smaller facilities. They're big enough obviously to hold, in steady state, 100,000 SKUs and then also to have all of our nearby fulfillment centers be able to inject lots of different selection in there, so we can cover several million SKUs in that same-day or 1-day fashion.

But they're smaller -- in general, they're smaller facilities with less conveyance and with more streamlined pick directly to pack and to get out to the dock to ship. And so they're just much more efficient as well. So we actually think that the expansion of those is going to not just help with speed and with demand, but we're going to also like the cost structure associated with that. And I continue to believe what I said last quarter, Brian, which is I do believe that we'll get back

to margins like what we had pre COVID. And I don't think that's the end of what's possible for us there.

On the AI question, what I would tell you, every single one of our businesses inside of Amazon, every single one has multiple generative AI initiatives going right now. And they range from things that help us be more cost effective and streamlined in how we run operations in various businesses to the absolute heart of every customer experience in which we offer. And so it's true in our stores business. It's true in our AWS business. It's true in our advertising business. It's true in all our devices, and you can just imagine what we're working on with respect to Alexa there. It's true in our entertainment businesses, every single one. It is going to be at the heart of what we do. It's a significant investment and focus for us.

## **Operator**

Our final question comes from the line of Doug Anmuth with JPMorgan.

## **Douglas Anmuth**

Just on AWS, as you lap optimizations and the macro-driven slowdown and you start to get the new workload deployment, how do you think about what normalized growth could look like for AWS in a better macro environment? And then secondly, helpful to get the just over \$50 billion CapEx number for this year. Just curious how generative AI changes or could change your CapEx trajectory going forward.

## **Andrew Jassy**

Well, it's a good question. And I would say that while I expect there will continue to be cost optimization, I think that the balance of cost optimizations to actually new workloads and new migrations as we saw a shift in that in Q2, I expect that we'll continue to see that shift over time. And as I said, I mean, everybody has to make their own conclusions on what percentage revenue growth they believe it means.

But to grow double digits on an \$88 billion revenue run rate business, when you're seeing that amount of cost optimization as every company in the world is trying to save as much money as they can in the last year, to still grow double digits on a base that size means that we're acquiring a lot of new customers and a lot of new workloads. And so I'm very bullish on the growth of AWS over the next several years. And any one quarter, it's hard for me to predict, but I am bullish about it in the medium to long term for sure.

I think that on the -- how much generative AI may impact the capital expense spend, included in that number is a pretty significant amount of capital expense in the AWS business for large language models and for generative AI. And we have quite a bit of demand right now. And so it's -- like in AWS, in general, one of the interesting things in AWS, and this has been true from the very earliest days, which is the more demand that you have, the more capital you need to spend because you invest in data centers and hardware upfront and then you monetize that over a long period of time.

So I would like to have the challenge of having to spend a lot more in capital in generative AI because it will mean that customers are having success and they're having success on top of our services and -- but I think that, that's our best estimate right now on that capital expense, and we'll update it if we find it's different.

**Dave Fildes**

Thank you for joining us on the call today and for your questions. A replay will be available on our Investor Relations website for at least 3 months. We appreciate your interest in Amazon, and look forward to speaking with you again next quarter.

**Operator**

Ladies and gentlemen, that does conclude today's teleconference. You may disconnect your lines at this time. Thank you for your participation.