

# Amazon.com, Inc. NasdaqGS:AMZN

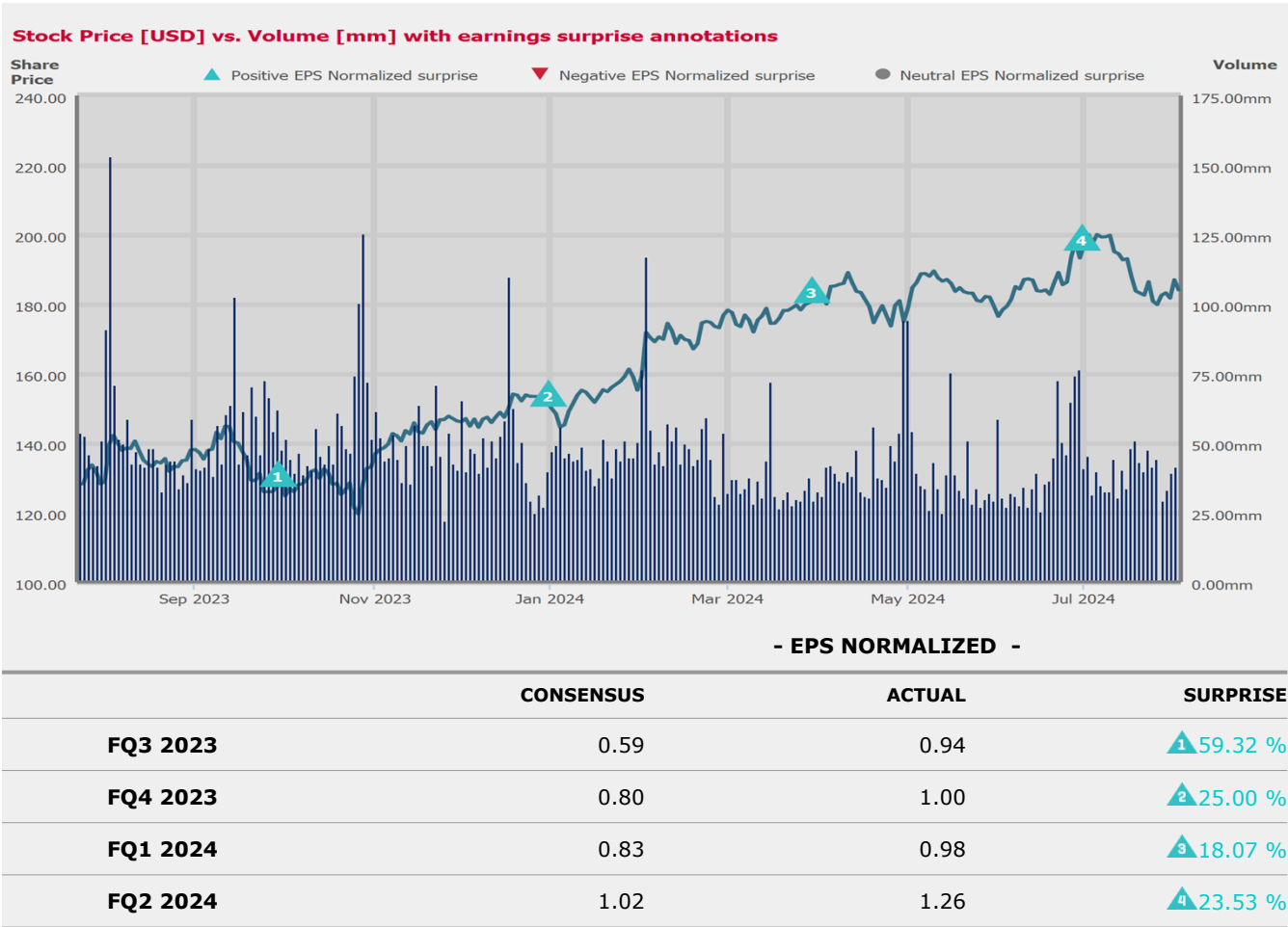
## FQ2 2024 Earnings Call Transcripts

Thursday, August 01, 2024 9:30 PM GMT

S&P Global Market Intelligence Estimates

|                | -FQ2 2024- |           |           | -FQ3 2024- | -FY 2024- | -FY 2025- |
|----------------|------------|-----------|-----------|------------|-----------|-----------|
|                | CONSENSUS  | ACTUAL    | SURPRISE  | CONSENSUS  | CONSENSUS | CONSENSUS |
| EPS Normalized | 1.02       | 1.26      | ▲23.53    | 1.15       | 4.58      | 5.78      |
| Revenue (mm)   | 148757.22  | 147977.00 | ▼(0.52 %) | 158328.23  | 638960.11 | 710147.46 |

Currency: USD  
Consensus as of Jul-31-2024 1:40 AM GMT



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# Call Participants

## EXECUTIVES

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*President, CEO & Director*

**Brian T. Olsavsky**  
*Senior VP & CFO*

**Dave Fildes**  
*Director of Investor Relations*

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# Presentation

## Operator

Thank you for standing by. Good day, everyone, and welcome to the Amazon.com Second Quarter 2024 Financial Results Teleconference. [Operator Instructions] Today's call is being recorded. And 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

*Director of Investor Relations*

Hello, and welcome to our Q2 2024 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 2023. Our comments and responses to your questions reflect management's views as of today, August 1, 2024, 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 condition, 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, cloud services, and new and emerging technologies, 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 R. Jassy

*President, CEO & Director*

Thanks, Dave. Today, we're reporting \$148 billion in revenue, up 11% year-over-year, excluding the impact from foreign exchange rates. Operating income was \$14.7 billion, up 91% year-over-year; and trailing 12-month free cash flow adjusted for equipment finance leases was \$51.4 billion, up 664% or \$44.7 billion year-over-year.

As I think about what matters to customers long term and therefore to Amazon, there's a lot to like about what we're seeing. Starting with AWS, year-over-year revenue growth accelerated again from 17.2% in Q1 to 18.8% in Q2. We're continuing to see 3 macro trends drive AWS growth. First, companies have completed the significant majority of their cost optimization efforts and are focused again on new efforts.

Second, companies are spending their energy again on modernizing their infrastructure and moving from on-premises infrastructure to the cloud. This modernization enables builders to save money, innovate at a more rapid clip and drive productivity in most companies' scarcest resources, developers. This is the flip I've talked about in the past, where the vast majority of global IT spend today is on-premises,

and we expect that to keep inverting over time. With the broadest functionality, the strong security and operational performance and the deepest partner ecosystem, AWS continues to be customers' partner of choice and the biggest beneficiary of this flip from on-premises to the cloud.

And third, builders and companies of all sizes are excited about leveraging AI. Our AI business continues to grow dramatically with a multibillion-dollar revenue run rate despite it being such early days, but we can see in our results and conversations with customers that our unique approach and offerings are resonating with customers. At the heart of this strategy is a firmly held belief, which we've had since the beginning of AWS that there is not one tool to rule the world. People don't want just one database option or one analytics choice or one container type. Developers and companies not only reject it but are suspicious of it. They want multiple options for flexibility and to use the best tool for each job to be done.

The same is true in AI. You saw this several years ago when some companies tried to argue that TensorFlow will be the only machine learning framework that mattered and then PyTorch and others overtook it. The same one model or one chip approach dominated the earliest moments of the generative AI boom, but we have a lot of data that suggests this is not what customers want here either, and our AWS team is determined to deliver choice and options for customers.

You can see this philosophy in the primitive building blocks we're building at all 3 layers of the GenAI stack. At the bottom layer, which is for those building generative AI models themselves, the cost of compute for training and inference is critical, especially as models get to scale. We have a deep partnership with NVIDIA and the broader selection of NVIDIA instances available, but we've heard loud and clear from customers that they relish better price performance. It's why we've invested in our own custom silicon in Trainium for training and Inferentia for inference. And the second versions of those chips, with Trainium coming later this year, are very compelling on price performance. We are seeing significant demand for these chips.

These model builders also desire services that make it much easier to manage the data, construct the models, experiment, deploy to production and achieve high-quality performance, all while saving considerable time and money. That's what Amazon SageMaker does so well including its most recently launched feature called HyperPod that changes the game and networking performance for large models, and we're increasingly seeing model builders standardize on SageMaker.

While many teams will build their own models, lots of others will leverage somebody else's frontier model, customize it with their own data, and seek a service that provides broad model selection and great generative AI capabilities. This is what we think of as the middle layer, what Amazon Bedrock does and why Bedrock has tens of thousands of companies using it already. Bedrock has the largest selection of models, the best generative AI capabilities in critical areas like model evaluation, guardrails, RAG and agenting and then makes it easy to switch between different model types and model sizes.

Bedrock has recently added Anthropic's Claude 3.5 models, which are the best performing models on the planet; Meta's new Llama 3.1 models; and Mistral's new Large 2 models. And Llama's and Mistral's impressive performance benchmarks and open nature are quite compelling to our customers as well.

At the application or top layer, we're continuing to see strong adoption of Amazon Q, the most capable generative AI-powered assistant for software development and to leverage your own data. Q has the highest known score and acceptance rate for code suggestions, but it does a lot more than provide code suggestions. It tests code, outperforms all other publicly benchmarkable competitors on catching security vulnerabilities and leads all software development assistance on connecting multiple steps together and applying automatic action.

It also saves development teams time and money on the muck nobody likes to talk about. For instance, when companies decide to upgrade from one version of a framework to another, it takes development teams many months, sometimes years burning valuable opportunity costs and churning developers who hate this tedious though important work. With Q's code transformation capabilities, Amazon has migrated over 30,000 Java JDK applications in a few months, saving the company \$260 million and 4,500 developer years compared to what it would have otherwise cost. That's a game changer.

And think about how this Q transformation capability might evolve to address other elusive but highly desired migrations. During the past 18 months, AWS has launched more than twice as many machine learning and generative AI features into general availability than all the other major cloud providers combined. This team is cooking, but we're not close to being done adding capabilities for customer [indiscernible] base.

For perspective, we've added over \$2 billion in advertising revenue year-over-year and generated more than \$50 billion in revenue in the trailing 12 months. Sponsored ads drive the majority of our advertising revenue today, and we see further opportunity there. Even with this growth, it's important to realize we're at the very beginning of what's possible in our video advertising.

In May, we made our first appearance at the upfronts, and we're encouraged by the agency and advertiser feedback on the differentiated value we offer across our content, reach, signals and ad tech. With ads and Prime Video, the exciting opportunity for brands is the ability to directly connect advertising that's traditionally been focused on driving awareness, as is the case for TV, to a business outcome like product sales or subscription sign-ups.

We're able to do that through our measurement and ad tech, so brands can continually improve the relevance and performance of their ads. While ads have become the norm to streaming video, we aim to have meaningfully fewer ads than linear TV and other streaming TV providers. And of course, for customers preferring an ad-free experience, we offer that option for an additional \$2.99 a month.

In our Stores business, we saw growth of 9% year-over-year in the North America segment and 10% year-over-year in the international segment. A few notes on our North America revenue growth rate. First, last quarter's leap day added about 100 basis points of year-over-year growth. Second, we're seeing lower average selling prices, or ASPs, right now because customers continue to trade down on price when they can. More discretionary higher ticket items like computers or electronics or TVs are growing faster for us than what we see elsewhere in the industry but more slowly than we see in a more robust economy, and our continued faster delivery speed is earning us more of our customers' everyday essentials business.

Third, our seller fees are a little lower than expected given the behavior changes we've seen from our latest fee changes. While some of these issues compress short-term revenue, we generally like these trends. While consumers are being careful on price, our North American unit growth is meaningfully outpacing our sales growth, as our continued work on selection, low prices and delivery is resonating. So far this year, our speed of delivery for Prime customers has been faster than ever before, with more than 5 billion units arriving the same day or next day. As more customers experience our fast delivery, they look to Amazon for more of their shopping needs, and the continued acceleration of our everyday essentials business is an example of this phenomenon.

On seller fees, lowering apparel fees has spurred substantial year-over-year unit growth in apparel. And the incentive we've given sellers to send their items to multiple Amazon inbound facilities so they can save money where they save us effort and money is getting more traction than we'd even hoped. These collective developments will benefit customers in the form of better selection, lower prices and faster delivery speed.

There's no shortage of ideas aimed at improving the experience for stores customers. For instance, we're adding even more value to Prime, recently introducing free restaurant delivery in many of our geos, expanding Amazon's pharmacy RxPass to Medicare members. This is a benefit that gives subscribers all you can consume access to the most common generic medications for just \$5 a month, and offering a grocery subscription to help save on grocery items when shopping our U.S. and U.K. fresh stores.

As we pursue these initiatives, we remain focused on lowering our cost to serve. We have a number of opportunities to further reduce costs, including expanding our use of automation and robotics, further building out our same-day facility network and regionalizing our inbound network. With more optimal inbound inventory placement, we expect to enable faster speeds, consolidate more orders in one box and reduce inventory transfers once items reach a fulfillment center.

These cost improvements won't happen in 1 quarter or 1 fell swoop. They take technology and process innovation with a lot of outstanding execution, but we see a path to continuing to lower our cost to serve, which, as we've discussed in the past, has very meaningful value for customers in our business. As we lower our cost to serve, we can add more low ASP selection that we can support economically, which, coupled with our fast delivery, puts Amazon in the consideration set for increasingly more shopping needs for customers.

A few other comments about areas in which we're investing. We remain very bullish on the medium to long-term impact of AI in every business we know and can imagine. The progress may not be one straight line for companies. Generative AI especially is quite iterative, and companies have to build muscle around the best way to solve actual customer problems. But we see so much potential to change customer experiences.

We see it in how our generative-AI-powered shopping assistant, Rufus, is helping customers make better shopping decisions. We see it in our AI features that allow customers to simulate trying apparel items or changing the buying experience. We see it in our generative AI listing tools enabling sellers to create new selection with a line or 2 of text versus the many forms previously required. We see it in our fulfillment centers across North America, where we're rolling out Project Private Investigator, which uses a combination of generative AI and computer vision to uncover defects before products reach customers.

We see it in how our generative AI is helping our customers discover new music and video. We see it in how it's making Alexa smart, and we see it in how our custom silicon and services like SageMaker and Bedrock are helping both our internal teams and many thousands of external companies reinvent their customer experiences and businesses. We are investing a lot across the board in AI, and we'll keep doing so as we like what we're seeing and what we see ahead of us.

We also continue to like the progress in Prime Video. Our storytelling is resonating with our hundreds of millions of monthly viewers worldwide, and the 62 Emmy nominations Amazon MGM Studios recently received is another supporting data point. We recently debuted titles like Fallout, the second most watched original title ever for Prime Video; The Idea of You, which attracted nearly 50 million viewers worldwide in the first 2 weeks on Prime Video; and Season 4 of The Boys, which reached #1 on Prime Video in 165 countries in its opening 2 weeks.

And we continue to see momentum in live sports. We recently announced 11-year landmark deals with the NBA and the WNBA. When combined with our original films and shows, partner streaming services, licensed content and rent or buy titles, Prime Video continues to evolve into the best destination for streaming video.

And for Project Kuiper, our low Earth orbit satellite constellation, we're accelerating satellite manufacturing in our facility in Kirkland, Washington. We've announced a distribution agreement with Vrio who distributes DIRECTV Latin America and SKY Brazil to offer Project Kuiper satellite broadband network to residential customers across 7 countries in South America. And we continue to field significant demand for the service from enterprise and government entities. We expect to start shipping production satellites late this year and continue to believe this could be a very large business for us.

I could go on, but we'll stop here. There's a lot to feel optimistic about over the next several years, and the team collectively remains focused on continuing to invent and deliver for our customers in the business.

With that, I'll turn it over to Brian for a financial update.

**Brian T. Olsavsky**  
*Senior VP & CFO*

Thanks, Andy. Let's start with our top line financial results. Worldwide revenue was \$148 billion, an 11% increase year-over-year, excluding the impact of foreign exchange. This equates to a \$1 billion headwind from foreign exchange in the quarter, which is about \$300 million higher than we had anticipated in our Q2 guidance range.

Worldwide operating income nearly doubled year-over-year to \$14.7 billion, which was \$700 million above the high end of our guidance range. Across all of our segments, we remain focused on managing costs in a way that allows us to continue innovating and investing in areas that we think can move the needle for our customers.

Starting with the North America and international segments. Customers continue to respond positively to our focus on low prices, broad selection and fast shipping offers. We delivered our fastest speeds ever so far this year, which helps drive strength in areas like our everyday essentials. These include items like nonperishable foods as well as health, beauty and personal care items. And Prime members continue to increase their shopping frequency while growing their spend on Amazon.

Overall unit sales grew 11% year-over-year, which is consistent with our growth rates in Q1 after you adjust for the approximately 100 basis point impact of leap year. North America segment revenue was \$90 billion, an increase of 9% year-over-year, and international segment revenue was \$31.7 billion, an increase of 10% year-over-year, excluding the impact of foreign exchange. North America segment operating income was \$5.1 billion, an increase of \$1.9 billion year-over-year. Operating margin was 5.6%, up 170 basis points year-over-year and down 20 basis points quarter-over-quarter.

If we look at profitability of the core North America stores business, we actually improved our margin again quarter-over-quarter in Q2. The overall North America segment operating margin decreased slightly due to increased Q2 spend in some of our investment areas, including Kuiper, where we're starting to manufacture satellites we'll launch into space in Q4.

We saw improvements in our cost to serve driven by our efforts to place inventory more regionally, closer to where our customers are. This resulted in more consolidated shipments with higher units per box shipped. We also saw packages traveling shorter distances to customers, and this also led to better on-road productivity in our transportation network.

Our international segment was profitable again in Q2, with operating income of \$300 million, an improvement of \$1.2 billion year-over-year. Operating margin was 0.9%, up 390 basis points year-over-year. This increase is primarily driven by our established countries as we improve our cost structure with better inventory placement and more consolidated shipments. Additionally, our emerging countries continue to expand their customer offerings, leverage their cost structure and invest in expanding Prime benefits. We are pleased with the overall progress of these countries as they make strides on their respective paths to profitability.

Advertising remains an important contributor to profitability in the North America and international segments. And we saw strong growth on an increasing larger revenue base this quarter. We continue to see opportunities that further expand our offering in areas that are driving growth today like sponsored products as well as newer areas like Prime Video ads.

Moving next to our AWS segment. Revenue was \$26.3 billion, an increase of 18.8% year-over-year, excluding the impact of foreign exchange. AWS now has an annualized revenue run rate of more than \$105 billion. During the second quarter, we saw continued growth across both generative AI and non-generative AI workloads. We saw companies turn their attention to newer initiatives, bring more workloads to the cloud, restart or accelerate existing migrations from on-premises to the cloud and tap into the power of generative AI.

AWS operating income was \$9.3 billion, an increase of \$4 billion year-over-year. It's driven by our continued focus on cost control, including a measured pace of hiring. Additionally, AWS operating margin includes an approximately 200 basis point favorable impact from the change in the estimated useful life of our servers that we instituted in Q1.

As we've long said, we expect AWS operating margins to fluctuate over time, driven in part by the level of investments we're making at any point in time. We remain focused on driving efficiencies across the business, which enables us to invest to support the strong growth we're seeing in AWS, including generative AI.



Now let's turn our attention to capital investments. As a reminder, we define these as a combination of CapEx plus equipment finance leases. For the first half of the year, CapEx was \$30.5 billion. Looking ahead to the rest of 2024, we expect capital investments to be higher in the second half of the year. The majority of the spend will be to support the growing need for AWS infrastructure as we continue to see strong demand in both generative AI and our non-generative AI workloads.

For the third quarter, specifically, I'd highlight a few seasonal factors to keep in mind. First, we hosted another successful Prime Day in mid-July. It was our 10th Prime Day and was our largest ever. Prime members globally saved billions of dollars on deals across every product category. From a profitability perspective, we've historically seen a headwind to operating margin in Q3 driven by Prime Day deals as well as the marketing spend surrounding the event.

Additionally, in Q3, we also began to ramp up our capacity to handle Q4 holiday volumes in our fulfillment network. And lastly, we expect an increase in digital content costs quarter-over-quarter from the return of our NFL Thursday night football. We remain heads-down focused on driving a better customer experience, who believe putting customers first is the only reliable way to create lasting value for our shareholders. With that, let's move on to your questions.

# Question and Answer

## Operator

[Operator Instructions]. And our first question comes from the line of Eric Sheridan with Goldman Sachs.

### **Eric James Sheridan**

*Goldman Sachs Group, Inc., Research Division*

Thanks for all the detail in the prepared remarks. Maybe a two-parter on AWS. There's been a theme during the last couple of weeks of earnings of the potential to overinvest as opposed to under invest in AI as a broad theme. I'm curious, Andy, if you have a perspective on that in terms of thinking about elements of capitalizing on the theme longer term against the potential for pace and cadence of investment on AWS as a segment?

And the second part would be coming back to your comments on custom silicon. How do you feel about custom silicon both from a pace of investment and then more broadly, how you think about it as a return profile on a pivot to more custom silicon in your portfolio over the medium to long term?

### **Andrew R. Jassy**

*President, CEO & Director*

Thanks, Eric. I'll take them in order. I think on the question about investment in AWS and on the AI side, I think where I'd start is, I think, one of the least understood parts about AWS over the last 18 years has been what a massive logistics challenge it is to run that business.

If you think about the fact that we have about 35 regions and think of a region as multiple -- a cluster of multiple data centers and about 110 availability zones, which is roughly equivalent to a data center, sometimes it includes multiple and then if you think about having to land thousands and thousands of SKUs across the 200 AWS services in each of those availability zones at the right quantities, it's quite difficult. And if you end up actually with too little capacity, then you have service disruptions, which really nobody does because it means companies can't scale their applications.

So most companies deliver more capacity than they need. However, if you actually deliver too much capacity, the economics are pretty woeful, and you don't like the returns of the operating income. And I think you can tell from having -- we disclosed both our revenue and our operating income in AWS that we've learned over time to manage this reasonably well. And we have built models over a long period of time that are algorithmic and sophisticated that land the right amount of capacity. And we've done the same thing on the AI side.

Now AI is newer. And it's true that people take down clumps of capacity in AI that are different sometimes. I mean -- but it's also true that it's not like a company shows up to do a training cluster asking for a few hundred thousand chips the same day. Like you have a very significant advanced signal when you have customers that want to take down a lot of capacity.

So while the models are more fluid, it's also true that we've built, I think, a lot of muscle and skill over time in building these capacity signals and models, and we also are getting a lot of signal from customers on what they need. I think that it's -- the reality right now is that while we're investing a significant amount in the AI space and in infrastructure, we would like to have more capacity than we already have today. I mean we have a lot of demand right now, and I think it's going to be a very, very large business for us.

On the custom silicon point, it's really interesting what's happened here. And it's also our strategy and approach here has been informed by running AWS for 18 years. When we started AWS, we had and still have a very deep partnership with Intel on the generalized CPU space. But what we found from customers is that they -- when you find a -- an offering that is really high value for you and high return, you don't actually spend less, even though you're spending less per unit. You spend less per unit, but it enables

you, it frees you up to do so much more inventing and building for your customers. And then when you're spending more, you actually want better price performance than what you're getting.

And a lot of times, it's hard to get that price performance from existing players unless you decide to optimize yourself for what you're learning from your customers and you push that envelope yourself. And so we built custom silicon in the generalized CPU space with Graviton, which we're on our fourth model right now. And that has been very successful for customers and for our AWS business, is it saves customers about -- up to about 30% to 40% price performance versus the other leading x86 processors that they could use.

And we saw the same trend happening about 5 years ago in the accelerator space in the GPU space, where the products are good, but there was really primarily 1 provider and supply was more scarce than what people wanted. And people -- our customers really want improved price performance all the time. And so that's why we went about building Trainium, which is our training chip, and Inferentia, which is our inference chip, which we're on second versions of both of those. They will have very compelling relative price performance.

And in a world where it's hard to get GPUs today, the supply is scarce and all the schedules continue to move over time, customers are quite excited and demanding at a high clip, our custom silicon, and we're producing it as fast as we can. I think that's going to have very good return profile just like Graviton has, and I think it will be another differentiating feature around AWS relative to others.

### **Operator**

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

#### **Brian Thomas Nowak**

*Morgan Stanley, Research Division*

I have 2. So the first one I wanted to ask about in the second quarter, the retail gross margins that we're trying to do the monkey math look a little weaker than expected. Was there any extra pressure on retail gross margins because of discounting? Or is that where Kuiper is? Or sort of how do we think about some of the drivers of retail gross margins in the quarter of shipping?

And the second one, Andy, in the past, you talked about cost to serve improvement and sort of getting the North America margins back to pre-pandemic levels. Can you just remind us again sort of the internal philosophy about executing on that? Is there a time line to deliver on that? Sort of how are you sort of balancing showing that profitability improvement over the next couple of years versus pressing on new investments like Kuiper and perhaps reinvesting some of those profits over the next couple of years?

#### **Brian T. Olsavsky**

*Senior VP & CFO*

Brian, let me start with the first question on North America margins. So if you look at the segment operating margins, we did decrease 20 basis points sequentially from Q1 to Q2. I'll remind you that we have -- see the annual step-up in stock-based compensation at the end of Q1 each year, and that added about \$1.8 billion of stock-based comp expense in Q2 versus Q1. So that's impacting, to some extent, all 3 segments.

But even with that stock-based comp step-up, the stores part of the North America segment, increased the margin again last quarter. So we're continuing to see strong improvements in cost to serve as well as improvement in speed, added selection, better safety. So a lot of the key areas that we're hitting on are strong. What you're seeing for the segment is that some of our investment areas had a tick up in expenses and investment in Q2 versus Q1. That's not unheard of. Q1 is usually the lightest investment quarter. Things like Prime Video and devices have less investment going on in those quarters. But the one thing I'd point out, I think we mentioned it, is Kuiper stepping up a bit in Q2 versus Q1, as we start to build satellites that we'll launch in Q3 and Q4 this year.

#### **Andrew R. Jassy**

*President, CEO & Director*

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On your second question, Brian, I continue and the team continues to believe that we have the opportunity to expand the margin in our Stores business. And as I've said on a number of the calls that we've done, it's not going to happen in 1 quarter. It's not going to happen in one fell swoop. It's going to take work over a long period of time.

But I think that 1 of the silver linings, if you will, about 1.5 years ago in the ricochet of the pandemic and all the growth that we had and the cost to serve challenges that we had was it really forced us to reevaluate everything in the network and really, even our most closely held beliefs over a long period of time. And what it did was it unveiled a number of opportunities that we believe we have to keep driving cost to serve down.

And the first one that you've seen play out over the last year or so has been the regionalization of the U.S. network. And I think one thing to remember about that is that while it's had even bigger impact than maybe we theorized when we first architected it, we're still not done fully honing it. There's a lot of ways that we continue to optimize that U.S. regionalization that we think will continue to bear lower cost to serve.

But at the same time, we found a number of other areas where we believe we can take our cost down while also improving the customer experience. One of the great things about regionalization was it not only took our cost to serve down, but it meaningfully changed the speed with which we're able to get items to customers. And so we have a number of those other opportunities.

Another example of that is regionalizing our inbound network, which is also going to lower our cost to serve and get items more close to end users and diminish the amount of time it takes to get them to customers. We have a number of things that we're working on that allow us to combine more units per box, which lowers our costs as well and a lot of customers like that better because it's better for the environment, having more units per box.

So I think we have a lot of opportunities to continue to take down our cost to serve. And strategically and philosophically, just 2 other things as you were alluding to that question. I think that from our perspective, as we're able to take cost to serve down, it means that we're able to afford to have more selection that we're able to offer to customers. And there are a lot of lower ASP items there, average selling price items, that we don't stock because they're not economic to stock with our current cost to serve.

But as we work hard to make progress like we are on lowering our cost to serve, that allows us to add more selection. And we see this time in and time out that we add -- when we add more selection, customers actually consider us for more of their purchases and spend more with us down the line.

I think the other thing, too, I would tell you is that I don't see it as being binary in any way, nor have I really ever seen it this way in the history of the company. I've been here 27 years. But we don't think of it as we can either be investing or we can be working on trying to take our cost to serve down. We believe we can do both.

If you think about the examples you gave, the Stores business and the Kuiper business are -- they're just different people working on those businesses. So our Stores team is going to continue to work really hard on expanding selection and keeping prices low and speeding up our delivery times and driving our cost to serve down, while our Kuiper team is working on how to figure out how to help the 400 million to 500 million households around the world who don't have broadband connectivity get that connectivity and allow them to do a lot of the things we take for granted today with broadband connectivity. So they're not going to be binary. We're going to work on them both at the same time.

### **Operator**

And our next question comes from the line of Mark Mahaney with Evercore.

### **Mark Stephen F. Mahaney**

*Evercore ISI Institutional Equities, Research Division*

Two questions. AWS, those 3 factors that are causing that kind of acceleration in Q2 and recovery in growth rates from a year ago, those sound sustainable. Is there any reason that we shouldn't see sort of ongoing acceleration at some level through the back half of the year?

And secondly, I just want to ask about a small segment of pharmacy. It seems to me like -- at least anecdotally, it seems to lean in more into marketing for that. And survey work suggests to us that there's kind of greater consumer interest in that. Just talk about where that business is for you. And is it at a point where you feel like you move beyond early adoption and are leaning into kind of getting more mass Amazon customer adoption?

**Andrew R. Jassy**  
*President, CEO & Director*

On the AWS question, it's always hard to predict what the growth rates are going to be, and it's a relatively large business at \$105 billion revenue run rate at this point. But I do think that we have seen the lion's share of the cost optimization happen.

And I also do believe that pre-pandemic we were on this march where most companies are trying to figure out how to modernize their infrastructure, which really means moving from on-premises to the cloud because they can save money and invent more quickly and get better developer productivity. And then the pandemic happened, and people were in survival mode. And then a difficult economy came, and people were trying to save money. And we just see people going back to asking themselves why aren't we taking this low hanging fruit here. I mean it makes -- I don't want to run my own data centers. I can actually be more cost effective and invent more quickly for my customers if I'm using the cloud. And AWS with just a lot more functionality, stronger operational performance and security, which really matters to customers as well and a deeper partner ecosystem continues to be the partner of choice as people are moving to the cloud.

And I think the generative AI component is in its very early days. It's -- as I said, we kind of sometimes look at it and say that it's interesting that we have a multibillion-dollar revenue run rate already in AI, and it's so early. But if we look at the amount of demand that we have from customers right now, it's very significant. So I think all 3 of those things have a chance and will likely continue over time. And we'll see where that growth rate nets out over the next number of years.

I think that the -- one other thing I would say about that, too, Mark, is that the business today, as I mentioned, it's a \$105 billion revenue run rate business. About 90% of the global IT spend is still on-premises. And if you believe that equation is going to flip, which I do, there's a lot of growth ahead of us in AWS as the leader in all those dimensions I mentioned. But I also think that generative AI itself and AI as a whole, it's going to be really large.

I mean it is not something that we originally factored when we were thinking about how large AWS could be and unlike the non-AI space, where you're basically taking all of this infrastructure that's been built on premises over a long period of time and working with customers to help them migrate it to the cloud, which is a lot of work by the way, in the generative AI space, it's going to get big fast, and it's largely all going to be built from the get-go in the cloud, which allows the opportunity for those businesses to continue to grow.

On the pharmacy side, I think you're right that you're seeing that business continue to grow and to get more resonance with customers. And I think it was always a relatively natural extension for us to build a pharmacy offering from our retail business. But I think a lot of what you see in the business has grown really quickly, a lot of what you've seen is that the work that the team has done on the customer experience over the last 18 months has really paid off.

Customers love the customer experience of Amazon Pharmacy. And we -- especially, by the way, when you think about the experience and the speed and ease with which you can order versus walking into a pharmacy, in a physical store, if you walk into pharmacies and -- in cities today, it's a pretty tough experience with how much is locked behind cabinets, where you have to press a button to get somebody to come out and open the cabinets for you and a lot of shoplifting going on in the stores.

So the combination of what's happening in the physical world and how much improved we've made our pharmacy experience is driving a lot of customer resonance and buying behavior, I think also you see us continuing to expand there. We expanded our RxPass package and program to Medicare members, and that program allows customers and members to be -- Prime members to be able to get up to 60 common medications for just \$5 a month. And we continue to launch same-day delivery of medications to cities. We have them in 8 cities, including Los Angeles and New York today with plans to expand to more than a dozen cities by the end of the year. So we're seeing a lot of growth there, and we're very optimistic about it.

**Operator**

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

**Brent John Thill**

*Jefferies LLC, Research Division*

On AWS, I'm curious if you had a backlog number you could share for the quarter. And I guess, Andy, when you think about getting the data state ready, I know AI today is early, but when you see most of these companies are having to move to public cloud, are you seeing a step-up in return to workloads moving to get ready for [ the state to stay ] even if they're not ready to adopt AI? What are you seeing in those sales motions?

**Dave Fildes**

*Director of Investor Relations*

This is Dave. I'll just start off just to give you the backlog figure. So at the end of the second quarter, it was \$156.6 billion. So that's up about 19% year-over-year.

**Andrew R. Jassy**

*President, CEO & Director*

On the second part of your question, Brent, what I would say is that it's true in analytics, but it's even maybe more so true in AI, which is that it's quite difficult to be able to do AI effectively if your data is not organized in such a way that you can access that data and run the models on top of them and then build the application. So when we work with customers, and this is true both when we work directly with customers as well as when we work with systems integrator partners, everyone is in a hurry to get going on doing generative AI. And one of the first questions that we ask is show us where your data is, show us what your data lake looks like, show us how you're going to access that data.

And there's very often work associated with getting your data in the right shape and in the right spot to be able to do generative AI. There -- fortunately, because so many companies have done the work to move to the cloud, there's a number of companies who are ready to take advantage of AI, and that's where we've seen a lot of the growth. But also it's worth remembering that, again, remember the 90% of the global IT spend being on-premises. There are a lot of companies who have yet to move to the cloud, who will, and the ability to use AI more effectively is going to be one of the many drivers in doing so for them.

**Operator**

And the next question comes from the line of John Blackledge with TD Cowen.

**John Ryan Blackledge**

*TD Cowen, Research Division*

Great. Two questions. First, the AWS op income margins were strong, again, mid-30% area. Just kind of what were the key drivers? And how should we think about AWS margins in the back half of the year? And then the international op income margin stepped down a bit Q-over-Q. Just curious about that.

**Brian T. Olsavsky**

*Senior VP & CFO*

Yes. Thank you, John. Let me start with AWS profitability. So yes, the margin is in the mid-30s percent range in Q2. It's up from the mid-20% range last year. So you're seeing the impact of a number of cost reductions that we've made and efficiencies we've driven in the business.

There's also an adjustment that we made to the useful life of servers that happened in Q1, we talked about last quarter. That contributed about 200 basis points of margin year-over-year. So we continue to work on the cost structure, but again, as we've said in the past, these operating margin will fluctuate and be lumpy quarter-to-quarter. We are -- we continue to work to build new products that attract new customers and work on our efficiencies.

Second question was?

**John Ryan Blackledge**

*TD Cowen, Research Division*

International segment margin.

**Dave Fildes**

*Director of Investor Relations*

Yes, this is Dave. Just real quick on that. You mentioned we're at about \$300 million profit for the quarter. That is up about 390 basis points year-on-year from a margin perspective. And as we talked about in the past, there's a number of countries at different stages of existence and maturity there. And so I think you're seeing continued progress certainly on a year-over-year basis with both our established countries.

So the U.K., Germany and Japan, in particular being sizable contributors to that business, continued improvement and build out there, similar to the factors we talked about with the U.S., focused on operational efficiency while expanding the customer experience. And then in the emerging countries, as we've said over the past several quarters, we launched about 10 countries over the last 7 years, really focused on, again, expanding that customer experience, building out the Prime member benefits while building scalable solutions for customers. And so I think in both that established and emerging areas, seeing good progress year-over-year and working for further improvement there.

**Operator**

And our final question will come from the line of Doug Anmuth with JPMorgan.

**Douglas Till Anmuth**

*JPMorgan Chase & Co, Research Division*

You factored in some macro and discretionary pressures into your 2Q guide, especially in Europe, and I think you called out computers, electronics and maybe TVs in 2Q as well. Just curious, were the macro trends generally as you expected? Or did you see softening through the quarter? And kind of how does that influence your 3Q outlook?

And then separately, Brian, can you help us quantify the incremental investment around Kuiper that you talked about?

**Brian T. Olsavsky**

*Senior VP & CFO*

Yes, sure. Thank you, Doug. The macro factors, if I step back, I think Andy discussed it earlier as well. We're seeing a lot of the same consumer trends that we have been talking about for the last year. Consumers being careful with their spend, trading down, looking for lower ASP products, looking for deals. That continued into Q2, and we expect it to continue into Q3. We're seeing signs of it continuing in Q3.

The difference in Q2 was that, again, we had very strong unit volume growth. We actually slightly accelerated when you adjust for leap year in North America unit growth in Q2. So the drop in revenue sequentially -- revenue growth sequentially was tied to ASP and both continuation of existing trends but also as we talked about growth in our everyday essentials business and categories.

So while we think we are selling a number of higher ticket items, certainly -- and holding up well in the market itself, certainly not as strong as it's been in a normalized economy. And so it's -- lower ASP products are more of the mix right now. And we like that because, again, our speed allows us to deliver, especially everyday essentials, quickly, and we'd like to be in the consideration set for consumers on those items. I -- we're not going to quantify Kuiper today, but thank you for your question.

**Dave Fildes**

*Director of Investor Relations*

And thanks for joining us today on the call 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 talking with you again next quarter.



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