OPERATE PARTICIPANTS

Anthony Charles Whitten Dell Technologies Inc. - Co-COO
Jeffrey W. Clarke Dell Technologies Inc. - Co-COO & Vice Chairman
Robert L. Williams Dell Technologies Inc. - SVP of IR
Thomas W. Sweet Dell Technologies Inc. - Executive VP & CFO
Yvonne McGill Dell Technologies Inc. - Corporate Controller
Tyler W. Johnson Dell Technologies Inc. - Senior VP & Treasurer

CONFERENCE CALL PARTICIPANTS

A.M. Sacconaghi Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst
Amil Jawaharlaz Daryanani Evercore ISI Institutional Equities, Research Division - Senior MD & Fundamental Research Analyst
David Vogt UBS Investment Bank, Research Division - Analyst
Erik William Richard Woodring Morgan Stanley, Research Division - Research Associate
Eddy M. Orabi TD Cowen, Research Division - Research Associate
Michael Ng Goldman Sachs Group, Inc., Research Division - Research Analyst
Samik Chatterjee JPMorgan Chase & Co., Research Division - Analyst
Shannon Siemsen Cross Crédit Suisse AG, Research Division - Research Analyst
Shek Ming Ho Deutsche Bank AG, Research Division - Director & Senior Analyst
Timothy Patrick Long Barclays Bank PLC, Research Division - MD and Senior Technology Hardware & Networking Analyst
Wamsi Mohan BofA Securities, Research Division - MD in Americas Equity Research

PRESENTATION

Operator

Good afternoon, and welcome to the fiscal year 2024 first quarter financial results conference call for Dell Technologies Inc. I'd like to inform all participants this call is being recorded at the request of Dell Technologies.

This broadcast is the copyrighted property of Dell Technologies Inc. Any rebroadcast of this information in whole or part without the prior written permission of Dell Technologies is prohibited.

I'd like to turn the call over to Rob Williams, Head of Investor Relations. Mr. Williams, you may begin.

Robert L. Williams - Dell Technologies Inc. - SVP of IR

Thanks, everyone, for joining us. With me today are Jeff Clarke, Chuck Whitten, Tom Sweet, Yvonne McGill and Tyler Johnson. Our earnings materials are available on our IR website, and I encourage you to review our materials and presentation, which includes additional content to complement our discussion this afternoon. Guidance will be covered on today's call.
During this call, unless otherwise indicated, all references to financial measures refer to non-GAAP financial measures, including non-GAAP gross margin, operating expenses, operating income, net income, and diluted earnings per share. A reconciliation of these measures to their most directly comparable GAAP measures can be found in our web deck and our press release. Growth percentages refer to year-over-year change unless otherwise specified.

Statements made during this call that relate to future results and events are forward-looking statements based on our current expectations. Actual results and events could differ materially from those projected due to a number of risks and uncertainties, which are discussed in our web deck and SEC filings. We assume no obligation to update our forward-looking statements.

Now I’ll turn it over to Chuck.

Anthony Charles Whitlen - Dell Technologies Inc. - Co-COO

Thanks, Rob. Our Q1 results demonstrate our strong execution and the power of our model in what remains an uncertain macroeconomic environment. At the summary level, we delivered revenue of $20.9 billion, operating income of $1.6 billion, diluted EPS of $1.31 and cash flow from operations of $1.8 billion. Consistent with our commentary in recent quarters, the demand environment remains challenged, and customers are staying cautious and deliberate in their IT spending.

We continue to see demand softness across our major lines of business, all regions, all customer sizes and most verticals. That said, we did see pockets of stronger demand performance worth noting. The CSG business performed sequentially better than our expectations at the time of our Q4 earnings call. And we did see some early signs of demand stabilization in commercial PCs in our small and medium business segments and across our transactional business. In storage, we saw continued demand growth in PowerStore, our marquee midrange offering, and in PowerFlex, our leading software-defined storage solution.

PowerStore has grown for 11 consecutive quarters since its release and PowerFlex has now grown for 7 consecutive quarters. And in servers, we saw an increase in demand for our AI optimized solutions. Interest has been particularly strong for our new purpose-built 16G server for artificial intelligence, the PowerEdge X9680, though we caution that we are early in the demand cycle for AI infrastructure and it will take time to translate to the P&L. In what was a challenging demand backdrop, we executed extremely well and stayed focused on what we could control. We maintained pricing discipline even as competitors continue to reduce excess channel inventory. Our average selling prices increased, and we delivered strong sequential and year-over-year gross margin performance given lower input costs.

We continue to maintain strong cost controls, reducing operating expenses by 6%. Since Q1 of last year, we have reduced operating expense by $240 million, and we’ll continue to focus on prudent cost management as the year progresses. Our supply chain performed well. We reduced inventory by approximately $800 million in Q1 and by $2.3 billion over the last year, and our lead times and backlog have normalized post pandemic and ahead of competitors. And we are clearly focused on relative performance. We again gained share in calendar Q1 in commercial PCs, excluding Chrome, the most profitable segment of the market and our focus. And we expect to gain share in Q1 in storage when IDC results come out later this month. Though we anticipate some fluctuations in share performance as the year progresses, given the timing of industry backlog reduction, we remain confident in our ability to remain a structural share gainer over the long term.

We also pressed forward on a substantial innovation agenda. Last week, we hosted our annual Dell Technologies World event with more than 10,000 attendees, and made several big announcements as we advance our strategies in multi-cloud, edge, AI, security, hybrid work and as-a-service solutions. In multi-cloud, we introduced 3 APEX cloud platforms developed with Microsoft, Red Hat and VMware to seamlessly extend cloud platform operating environments to on-premise environments. We also announced new APEX cloud storage for public cloud offerings, bringing Dell’s industry-leading block and file enterprise storage capabilities to Azure and AWS environments and delivering on the promise of Project Alpine announced last year.

We delivered on the vision of Project Frontier, introducing Dell NativeEdge, our software platform that makes it easier for customers to manage, simplify and secure their entire edge estate with a single solution. We announced Project Helix, our collaboration with NVIDIA that enables customers to quickly deploy generative AI on-premises at scale using their own proprietary data safely and securely. Under APEX, we met our commitment
to extend as-a-service capabilities across our full portfolio with the addition of compute and PC as a Service. And finally, we announced Project Ford Zero, a collaboration with over 30 partners to develop a U.S. Department of Defense validated solution that will ease the adoption of Zero Trust security in private clouds.

Looking ahead, we expect the cautious IT spending environment to continue in Q2. We expect CSG to perform closer to historical sequential, given the pockets of commercial PC demand we saw in Q1 and the duration of the PC down cycle relative to prior cycles. We expect Q2 ISG spending to remain muted as customers scrutinize and prioritize spend, though customers continue to move forward with digital investments. Sales cycles continue to lengthen given the macroeconomic uncertainty. And as the industry levels continue to normalize, we expect an increasingly competitive environment relative to Q1.

Ultimately, we have confidence in the long-term health of our core markets and the advantages of our business model. Data continues to increase exponentially in both quantity and value, and customers see us as a trusted partner, ready to help them navigate the complexities of multi-cloud, edge, AI, data management and hybrid work. We remain the industry leader in all of our key solution categories, are central to our customers’ technology agendas and have a strong track record of delivering on our commitments in any environment. So short and long term, we’ll stick to the playbook that has served us well across multiple cycles, focusing on customers, driving differentiated relative performance, delivering against our innovation agenda, prudently managing costs, maintaining pricing discipline and investing for the long term.

Now over to Tom for the detailed Q1 financials.

Thomas W. Sweet - Dell Technologies Inc. - Executive VP & CFO

Thanks, Chuck. We’re pleased with our Q1 execution given the current environment. We delivered revenue of $20.9 billion, down 20% with strong gross margins and operating cost management. Currency remained a headwind and impacted revenue by approximately 290 basis points. Gross margin was $5.2 billion and 24.7% of revenue. Gross margin rate was up 2 points, driven by lower input costs and pricing discipline. We did see increased pricing pressure in Q1, but we’re selective on deals depending upon the customer and the opportunity. Expect us to continue to focus on the more profitable segments of the market and remain disciplined on pricing.

Operating expense was $3.6 billion, down 6%, driven by lower marketing and headcount-related costs and 17.1% of revenue given scaling. We will continue to actively manage our overall spend as we move through the year. Operating income was $1.6 billion and 7.6% of revenue due to a decline in revenue, partially offset by a higher gross margin rate and lower operating expense. Our quarterly tax rate was 22.7%. Net income was $963 million, primarily driven by lower operating income and, to a lesser extent, a higher tax rate. Diluted earnings per share was $1.31, down 29% due to lower net income, partially offset by a lower share count.

Our recurring revenue in the quarter was approximately $5.6 billion, up 6%, and our remaining performance obligations, or RPO, was approximately $39 billion, which was down 7% due to a reduction in backlog, partially offset by an increase in deferred revenue. Deferred revenue was up primarily due to increases in services and software maintenance agreements. ISG revenue was $7.6 billion, down 18%, driven by soft demand in servers and storage. We delivered storage revenue of $3.8 billion with demand growth in PowerStore and PowerFlex. While Q1 is seasonally our softest storage quarter, we did see customer decisions extend out and some deal sizes reduced.

Servers and networking revenue was $3.8 billion. We saw server ASPs continue to expand, and our mix of high-value workload servers increased as we continue to sell deeper into the customers’ digital agenda. ISG operating income was $740 million, or 9.7% of revenue, down 2 points, primarily due to a decline in revenue, partially offset by a better gross margin rate.

Turning to CSG. The PC market has continued to slow since June of last year, and the market declined sharply in calendar Q4 and again in calendar Q1, down 29% in units. Our fiscal Q1 CSG revenue was $12 billion, down 23%, primarily driven by a decline in units, partially offset by higher average selling prices in commercial and consumer. In a continuation of trends we’ve seen in recent quarters, commercial fared better than consumer.

Commercial revenue and consumer revenue were $9.9 billion and $2.1 billion, respectively. CSG profitability was strong in Q1, with operating income of $892 million or 7.4% of revenue, up 20 basis points, driven by a higher gross margin rate and lower operating expenses. We remain
focused on commercial and the high end of consumer relative performance in executing our direct attach motion for services, software, peripherals, and financing.

Turning to DFS and APEX. Customer interest remains high in consumption and financing models that provide both payment flexibility and predictability. Our Q1 Dell Financial Services originations were $1.8 billion. DFS ending managed assets reached $14.3 billion, up 9%, while the overall DFS portfolio quality remains strong with credit losses near historically low levels. During the quarter, we continued to see APEX momentum, including an increase in the number of APEX customers that have subscribed to our as-a-service solutions.

Turning to our cash flow and balance sheet. Our cash flow from operations was seasonally very strong at $1.8 billion, aided by our focus on working capital efficiency. As Chuck mentioned, we reduced inventory by approximately $800 million in Q1 and by $2.3 billion over the last year through disciplined execution and improvement in our supply chain. And our receivables balance benefited from strong collections this quarter. Our balance sheet remained strong, and we ended the quarter with $9.2 billion in cash and investments, down $1 billion sequentially due to a $1.1 billion of core debt paydown and $527 million of capital returns, offset by free cash flow generation. Our core leverage ratio improved sequentially to 1.7x as we prepaid our $1 billion note due in June.

Turning to capital allocation. We will continue our balanced approach, repurchasing shares programmatically to manage dilution while maintaining the flexibility to be opportunistic. In Q1, we repurchased 6.1 million shares of stock for $251 million and paid $276 million in dividends.

Now I’ll turn it over to Yvonne to cover our guidance.

---

Yvonne McGill - Dell Technologies Inc. - Corporate Controller

Thanks, Tom. Turning to guidance. we expect Q2 revenue to be in the range of $20.2 billion and $21.2 billion or between down 3% and up 1% sequentially, with a midpoint of $20.7 billion. Currency continues to be a headwind, and we are expecting a roughly 200 basis point impact to Q2 revenue. We expect CSG revenue to be roughly flat sequentially and ISG down in the low single digits sequentially. With inventories normalizing across the supply chain, we expect a more competitive pricing environment. Given Q1 profitability, combined with more muted sequential component cost deflation, we expect gross margin rates to be down roughly 50 basis points sequentially. We expect our Q2 diluted share count to be between 733 million and 738 million shares and our diluted EPS to be $1.10, plus or minus $0.10.

For the full year, we’re maintaining our FY ’24 revenue expectations, down between 12% and 18% and down 15% at the midpoint. Given Q2 guidance, this implies a return to sequential growth in the second half of the year. Interest and other will be up approximately $100 million as we fund DFS originations in a higher interest rate environment. For our tax rate, you should assume 24% plus or minus 100 basis points. We are increasing our expectations for diluted earnings per share to $5.50, plus or minus $0.25.

In closing, expect us to continue to be disciplined in how we manage the business in the current macro environment, focusing on what we can control and delivering for our customers. While there is near-term uncertainty, we have strong conviction in the growth of our TAM over the long term. We are committed to delivering our value creation framework with revenue CAGR of 3% to 4%, a diluted EPS CAGR of 6% or higher and the net income to adjusted free cash flow conversion of 100% or higher over time. We have returned $5 billion to shareholders over the last 6 quarters through share repurchases and dividends, approximately 96% of our adjusted free cash flow over that time period, well in excess of our 40% to 60% return target.

We value our relationships with our shareholders, and we are actively listening to your feedback. We increased our annual dividend by 12% last quarter, and we recently put in place new governance enhancements to our Board and oversight structure. Ellen Kullman, has been elected by our Board as Lead Independent Director, with robust oversight responsibilities. And our Board committee members are independent directors. Also, with recent S&P Global eligibility rule changes, we are encouraged about the potential for future inclusion in the S&P 500 Index.

Now I’ll turn it back to Rob to begin Q&A.
Robert L. Williams - Dell Technologies Inc. - SVP of IR

Thanks, Yvonne. Let's go to the first question.

QUESTIONS AND ANSWERS

Operator

We'll take our first question from Erik Woodring with Morgan Stanley.

Erik William Richard Woodring - Morgan Stanley, Research Division - Research Associate

Tom, maybe this question is for you, or Yvonne, and that is you just beat the first quarter by $0.50. You only raised the full year guide by $0.20. And then on the revenue side, we're seeing some moving pieces that just look a little bit different than what you expected last quarter in terms of, last quarter, you talked about sequential revenue growth through the year. Now you're talking about a little bit of a weaker 2Q. And so can you just help us understand some of the moving pieces why seasonality might look a bit different today than what you thought 90 days ago and why the first quarter beat doesn't flow through fully through the year?

Yvonne McGill - Dell Technologies Inc. - Corporate Controller

Sure, Erik. Thanks. I'll start off here. So we did raise EPS given where we landed in Q1. In Q1, you really did see the strength of our model. So we were happy with that performance. But with the channel inventories and backlog clearing across the industry as well as access to lower cost components, we're expecting a more competitive environment going forward in the second quarter and beyond. The other areas we're looking at around component costs expecting to be deflationary in the second quarter, and you'll see that resulting in some gross margin dilution going forward.

All of these areas were contemplated in the guide we gave. And I want to reiterate it's still early in the year, right? It's the first -- we just finished the first quarter. And so we want to make sure that we maintain balanced approach there and with our priorities around our relative performance, balancing growth and profitability and continuing prudent cost control.

Operator

And our next question will come from Wamsi Mohan with Bank of America.

Wamsi Mohan - BofA Securities, Research Division - MD in Americas Equity Research

I was wondering if you could talk about how you're thinking about pricing and share and maybe also reference how you're looking at elasticity of demand as a response to pricing. I think, Yvonne, you just said it's definitely a more competitive environment. So where is Dell going to be kind of flexing more in its ability to drive more share with price? And in what areas do you think that won't be quite as much where there might not be as much elasticity of demand?

Anthony Charles Whitten - Dell Technologies Inc. - Co-COO

Wamsi, it's Chuck. Thanks for the question. Look, I don't think our posture has changed over multiple quarters on that topic. We maintain a balanced approach to profitability. And we are finding in the current environment, whether it's the CSG business or end servers or storage, there's just not
a lot of price elasticity out there to use. If there's a place in the business where we see elasticity, it's in the consumer business, which is a very small portion of what we focus on. So look, the pricing environment, as we've seen it through Q1 has been more challenged.

We're certainly seeing more aggression out there that always presents to us deals that we could choose to take at a margin losing proposition and we tend to steer clear of those. If we don't see a path to margin recovery, we tend to not play. So even in the falling deflationary environment, that's the posture we're taking. I would say across the business generally, we've seen TRUs remain stable, and that's both a function of, I think, that pricing discipline as well as the power of our direct model. Our attach in our CSG business as well as in our ISG business was good in Q1, and that helped offset that competitive pricing pressure that we saw across the portfolio.

Jeffrey W. Clarke - Dell Technologies Inc. - Co-COO & Vice Chairman

Maybe one other quick comment to build on what Chuck said, Wamsi, is look, we're committed to long-term share gain. That's part of the model that Chuck referred to in our prepared remarks. I think we've also been consistent that not all share gain in all categories is equivalent. So our focus continues to be in what we think are the advantaged opportunities for us, commercial PCs workstations, high-end consumer PCs and gaming and the opportunities that exist in our broad storage portfolio and server business. That's where we'll focus on share gains. We're a long-term share acquirer or gainer, and we'll continue to do so.

Operator

And our next question will come from Amit Daryani with Evercore.

Amit Jawaharaz Daryanani - Evercore ISI Institutional Equities, Research Division - Senior MD & Fundamental Research Analyst

I guess you pushed a fairly impressive performance in the free cash flow side this quarter. So I was hoping you could talk about, a, just free cash flow generation for the company broadly, how do you really think about it for the year, and is there any way to think about what normalized cash cycle they should look like for Dell. That would be really helpful.

And then b, I think, Tom, you talked about in the press release about how shareholder return is in excess of your target. Does that mean we should start to think about buybacks consistently outpacing your prior framework? Or anything on the buyback front would be helpful.

Thomas W. Sweet - Dell Technologies Inc. - Executive VP & CFO

Amit, it's Tom. Let me start with your second part of that question, and then I'll pivot over to Tyler, so we can chat about how we think about free cash flow in context of the financial model. Look, I mean, I think the shareholder return over the last 6 quarters has been -- I think we're right around $5 billion of overall capital return. And I think that's roughly about 96% of our free cash flow generation over that period of time. Obviously, part of that was the catch-up from the dilution that came out of the VMware spin, but we've been very much focused on how we return and create shareholder value over that period of time.

I also think you've seen -- you've heard from Michael over the last month or 2 or last quarter or so around the fact that he believes that there is incremental capability and capacity around capital return to shareholders, and that's something we're clearly evaluating. As we work our way through that, we'll continue to be opportunistic in how we think about share buyback relative to other uses of capital, we do have some debt that we're continuing that will -- we're focused on paying down this year in addition to the $1 billion that we just highlighted in the call. But look, I think from our commitment to our investor base is that we'll continue to drive shareholder value and capital return through, I think, an appropriate level of capital allocation.

And then, Tyler, why don't we turn it over to you and talk about free cash flow for a second?
Tyler W. Johnson - Dell Technologies Inc. - Senior VP & Treasurer

Yes. Let me try to frame it, maybe talking a little bit about what happened last year and then what we're seeing now, right? So last year, we obviously had a headwind from a working capital perspective. And we -- as you know, we've got a negative cash conversion cycle, and that can be a big driver of what our cash does. And we talked about last quarter how we didn't expect working capital to be a headwind this year. And what you saw in Q1 was obviously a pretty big benefit coming from both inventory and on the receivables side.

As I think about going forward and just recognizing, as a reminder, we don't give guidance, I would think about it this way. I think we still have opportunities in working capital, but it's not going to improve in a linear fashion. So I think that this is going to happen over time. We remain very focused on it. And as you think about what we've talked about in the second half of the year, returning to sequential growth, that would help throw off good cash. So look, I feel good about the year and where we are. I think that we'll migrate back towards that [1x]. And I think to your question about what's normalized, I think what I would pay attention to is working capital. That has the biggest impact. And as you see us improve there, you'll see cash improve.

Operator

And moving on to Toni Sacconaghi with Bernstein.

A.M. Sacconaghi - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

I'd just like to go back to the Q2 guidance. I think historically, you're up about 6% to 8% in revenues on a sequential basis. You're guiding for flat to slightly down. And I think you also commented, or Chuck did, in the prepared remarks that you expected kind of normal seasonal growth in PCs. So I wanted to understand, I'm still struggling to draw the bridge between normal seasonality and what you're guiding to. Is this all price? Or do you think the markets are weakening incrementally so that they're below normal seasonality? Or is there something about what happened with backlog this quarter? I was sort of under the impression you were going to build more backlog than normal this quarter, which would point to above seasonal growth. Maybe you can just help square the circle on how we should think about your guidance relative to seasonality and what the demand outlook out there is.

Anthony Charles Whitten - Dell Technologies Inc. - Co-COO

Yes. Thanks, Toni. Let me start on the CSG portion of the question, and then let me hand over to Yvonne on unpacking the guidance. But look, I would categorize the client business as still recovering. So I'd start with the consumer business, obviously, it remains under pressure. The commercial business showed some pockets of improvement. Our small and medium business performance improved as we called out, and it outperformed large enterprises. That is typically a good leading indicator for us. And our transactional business, which is inclusive of our small and medium business segment, but also reflects the run rate enterprise demand that is out there, also showed some signs of stability as we move through the quarter.

But what has not fully recovered yet is the large bids from the largest customers. And that's ultimately the demand that we're going to need to see for a full-scale recovery in the PC market. Enterprises just continue to be cautious about their spending. So that's what's factored into our Q2 guidance. We expect CSG revenue to be roughly flat sequentially. That reflects a recovering but not fully recovered market. I think if you look at it, it's probably closer to the 3-year average sequential but not yet back to pre-pandemic levels. Yvonne?

Yvonne McGill - Dell Technologies Inc. - Corporate Controller

Thanks, Chuck. Toni, I'd also add, I think our 3-year sequential is running at about 4% from Q1 to Q2. So that will be -- that's part of that. And what we flashed obviously is lower than that, sequential at the midpoint, down 1%, with CSG being flat and ISG being down [4%]. So I think that we're starting to see that. We also had -- as we disclosed today a better-than-expected first quarter. And so that's having a little bit of an impact in the
CSG space also. As I look through the rest of the guide, I think, again, we've talked about revenue, but other areas, we're expecting OpEx to be down sequentially, really in line with revenue at the midpoint. And we're expecting interest and other to be up about $60 million sequentially. So those are some of the elements that we're evaluating as we look through the guidance.

**Thomas W. Swee** - Dell Technologies Inc. - Executive VP & CFO

Toni, it's Tom. Let me also just add, if you step back and think about the Q1 revenue of $20.9 billion, which obviously came in higher than what our guide was when we talked about this a few months ago, included in that was some backlog reduction. And yes, backlog in our minds, is in a normal range, and we think about that as a range, not a point estimate and our -- if you look at our lead times, they're generally in line, except for maybe 1 or 2 outliers. So there was -- between -- if you look at our RPO walk, you can see there's roughly a $400 million to $500 million backlog reduction in that Q1 revenue number. And then so you think from a normalized base of roughly 20.4, then you take a -- we're about a 2% sequential growth up -- or 1.5% to 2% sequential, up to get to the [20.7]. It's lower than the 4% normal seasonal. There's also a bit of pricing pressure in there from ASPs given some of the component cost declines. And so that's the mix that's in play right now as we think about that 20.7 midpoint guide.

**Operator**

And our next question will come from Shannon Cross with Credit Suisse.

**Shannon Siemsen Cross** - Crédit Suisse AG, Research Division - Research Analyst

Chuck and Jeff, I'm wondering, can you talk a bit about how you're seeing AI as it relates to your product set. [Enrique] was talking about AI PCs. There's obviously -- on the server side, I think you had some announcements. But I'm also wondering in your conversations with customers, and I know it's early days, but how they're thinking about AI deployments where they think the data will reside where they want to inference. Just I'm curious because you have all these conversations, it would be helpful to get some feedback. Thank you.

**Anthony Charles Whitten** - Dell Technologies Inc. - Co-COO

You bet, Shannon. Let me start on the question of kind of the demand we're seeing and what we're hearing from customers, and then I'm going to ask Jeff to jump in on the technical aspects and what we're seeing in the portfolio. But look, I mean, we are seeing a lot of demand for AI optimized infrastructure. That's obviously a very good thing for our business. Customers, enterprises are broadly pursuing and experimenting with AI efforts right now. They're doing it on-premise and at the edge. And as the leader in infrastructure and data, that obviously has -- is good news for our business. As we said in our prepared remarks, demand for our XC9680, that's our 16G and first-to-market purpose-built AI server with 8 NVIDIA H100 or A100 GPUs, has been very good. But we're also seeing demand across our portfolio. It's not simply the specialized 8-way GPU servers that can run AI, not everything needs billions of parameters.

So net, look, we look at it and say, AI is going to drive demand for our business. It's going to drive demand for our business on-premise and at the edge, which is incremental growth and profitability for us. I just caution, as we said in our prepared remarks, that we are early in the demand cycle. And it's going to take time for that to translate to the P&L. Excitement for AI applications is ahead of GPU supply right now. And AI-optimized servers are still a very small part of our overall server mix. So ultimately to see a full recovery in our server business, it's going to require mainstream service to accelerate as well.

**Jeffrey W. Clarke** - Dell Technologies Inc. - Co-COO & Vice Chairman

Yes. Maybe Shannon some perspective on use cases. We've had AI and our PCs for years. So I don't know if it was recently said that we've been putting AI in our products across our server portfolio, our storage portfolio and our PC portfolio for many, many years. So those that are following -- that's the right thing to do. It's putting intelligence into our products to make better experiences for customers is absolutely what we've been doing and see. We're excited in the PC with what was announced at BUILD last week with new versions of Windows 11 with co-pilot and more
integrated AI capability. I love it as perhaps a reason to buy a new PC. We’ve got to get that done and get the products out of the marketplace, but that’s a pretty exciting opportunity being able to use Windows and the different forms of applications in a very different way and a more efficient way. So that’s exciting. And then where all the buzz is, is on generative AI and large language models. And it’s an incredible opportunity.

Demand, as Chuck referred to, has been great. I think that continues because, quite frankly, what customers are trying to do is to figure out how to use their data with their business context to get better business outcomes and greater insight to their customers and to their business. And while there’s a lot of discussion around these large generalized AI models, we think the more specific opportunity is around domain-specific and process-specific generative AI where customers can use their own data. The data sets tend to be smaller. Those data sets then can be trained more quickly, and they can use their business context to help them inform and run their businesses better. We think that’s the opportunity in front of us.

And it’s quite honestly why we announced Project Helix last week with NVIDIA, an opportunity to take enterprise AI at scale. They are easy to deploy, easy to design, easy to put install and use pretrained models, tune models and be able to drive inference out in the data center and at the edge. So we’re pretty excited about the opportunities in front of us.

Operator

And our next question will come from David Vogt with UBS.

David Vogt - UBS Investment Bank, Research Division - Analyst

I just want to dig into ISG and specifically on the server and storage margin. You mentioned loss volume leverage. Was there anything sort of unique in the quarter that maybe hit margins? I know you had a little bit of a benefit in the fourth quarter that was not sustainable. And how do we think about it as demand comes back reasonably to normal? Should server margins and storage margins be in that sort of historical 11% to 12% range? And longer term, what is potentially richer configurations mean for ISG margins down the road as we see obviously higher end use cases? And obviously, the talk of the town is AI. But as configurations become richer and richer, does that mean better pricing and ultimately clearly better margins for the ISG business? Or should we expect sort of a run rate that’s more consistent with the past?

Thomas W. Sweet - Dell Technologies Inc. - Executive VP & CFO

Well, David, let’s talk what we saw in Q1 just for a second on ISG margin. So in general, what we saw was relatively strong server margins given the cost environment we were in. So with the inventory work that the team did, the ability to get to the component -- incrementally lower component cost was helpful in the discover portfolio in Q1. And so I’m pleased with what we saw from the server op margin in Q1. Storage is a slightly different story. Now think about seasonality in storage typically our softest quarter from a demand perspective and from a shift perspective with storage and that clearly played out with what we saw in the quarter, generally soft storage demand. And in there, we did see some year-over-year margin pressure given some of the descaling that we saw, quite frankly, with lower revenue, lower gross margin dollars and some pressure on operating margin there.

Now look, we’ll continue to make sure that we’re adjusting the portfolio and the cost environment as we move forward in that as you go forward. As you fast forward and you think about the opportunity around margins, given pricing and component costs, I think there’s some opportunity there that we’ll be able to take advantage of as it relates to gross margin dollars, particularly on configuration as configurations get richer. I do think that, as Yvonne and Chuck alluded to, that the server ASP dynamic where we’re going to see some declines over time, given some of the pricing dynamics. So I think you get back to more historical norms, and storage is generally going to be just what’s the revenue velocity going to look like in the mix within that. Chuck, Yvonne, I don’t know if you’d add anything to that.
Anthony Charles Whitten - Dell Technologies Inc. - Co-COO

No, I think you got it. I think the question on AI margins, I would just continue to say, look, we view it as incremental growth and incremental margin dollars, the ASPs of our AI-optimized service are a multiple of our normal server average, and we see lots of opportunities to provide services around this infrastructure. These are critical workloads that are dealing with critical-sensitive data. So we ultimately don't see it as a commoditized space in the enterprise. But as Shannon alluded to in her question, it's still early days.

Operator

And we will take a question from Samik Chatterjee with JPMorgan.

Samik Chatterjee - JPMorgan Chase & Co, Research Division - Analyst

I guess just into the question on the second half sort of recovery that you're expecting more in terms of sequential growth. Just want to clarify if you're sort of expecting most of that to be driven by CSG or maybe what's your assumption in terms of ISG returning to sequential growth in the second half. And more sort of associated with that, how should I think about the reductions that you're doing on OpEx? Do we start to sort of think that you get back to sort of stable OpEx from -- as you see the business return to growth in the second half?

Yvonne McGill - Dell Technologies Inc. - Corporate Controller

Sure. Let me take that, Samik. As we are talking about sequential growth in the second half across the portfolio and inclusive of ISG and CSG, from an overall standpoint, I think that as we look at an OpEx level and spend level, that's certainly something that we'll continue to optimize. But I think overall, you should expect, as I stated earlier, continued improvement as the year progresses, but in an expected competitive environment. So I don't know if anybody had anything else to add.

Thomas W. Swee - Dell Technologies Inc. - Executive VP & CFO

You got it, Yvonne.

Operator

And our next question will come from Michael Ng with Goldman Sachs.

Michael Ng - Goldman Sachs Group, Inc., Research Division - Research Analyst

I just had one on the segment margins. I think last quarter, you said CSG margins might be back in the normalized 5% to 6% range for the year and ISG margins would be 200 to 250 basis points lower than the 15.6% in the fiscal fourth quarter. I was just wondering if that's still the case? Or are there any puts and takes that we should consider incrementally relative to last quarter?

Thomas W. Swee - Dell Technologies Inc. - Executive VP & CFO

Michael, if you look at -- I did say that last quarter, by the way, around CSG of 5 to 6. It's come in stronger than what I had anticipated, quite frankly, because we got to lower component costs. As we thought -- as the inventory management, I think, was quite strong. So that, combined with the pricing discipline that we talked about in our talk track as well as the fact that, quite frankly, we didn't see a lot of elasticity out there. So to burn economics on transactions or customer deals that didn't make sense to us we passed on.
So CSG profitability was quite strong. And that’s really a driver of a lot of the margin upside or the profitability upside we saw in the quarter. As it relates to ISG, it’s sort of a tale of 2 different sort of LOBs, right? The server margins were in the range that I expect it to be maybe a little bit stronger than I expected them to be given the component cost declines again. Storage margins were lower than I anticipated, quite frankly, because of the descaling that we saw in the P&L with the lower revenue, which obviously translates into lower gross margin dollars. And even though we’ve taken a number of OpEx actions, those are going to work their way through the P&L as we go through the year. So yes. So there were some -- obviously, some variances against the guide that we gave. I think we'll work through those as we go forward.

Operator

Our next question will come from Simon Leopold with Raymond James.


I wanted to see if you could update us on how you’re thinking about the overall PC market, sort of this idea of what's the new normal and where is your place in it, and sort of the trajectory given all the moving parts coming out of kind of this post-pandemic normalization. Where are we in the cycle? And what's your expectation for the year?

Anthony Charles Whitten - Dell Technologies Inc. - Co-COO

Yes. Let me build on my prior comments. Look, I don’t think we have a ton to add to our prior public comments on the size of the unit PC TAM. We continue to peg at around 250 million units. And as I always emphasize, the reality is not all of these PC units are created equal, right? So on an ASP basis, a commercial non-Chrome PC is more valuable than a Chromebook and a premium consumer PC above $800 is 2.8x more valuable than a mainstream consumer PC. So when we look at the TAM post pandemic, what we see is a bigger revenue and profit market than we did going into the pandemic, and that's net impact of the PC being asked to do more in a hybrid world.

In terms of the refresh cycle, again, as we called out, we see the business moving closer to normal sequential. So the rate of decline in the business has come down. That's starting to show signs of stability. And look, what we know is we've, as an industry, shipped 950 million units over the last 3 years. We, Dell, shipped 160 million PCs over the last 3 years. That mix is more heavily notebook. And all of our telemetry data says those devices are still in use.

So you have a commercial PC installed base that's at the highest levels that we've seen since 2014, given that we're now entering the fifth quarter of a commercial PC downturn that is typically 4 to 6 quarters in length. All of that points to improving sequential growth as the year progress. When and how fast that recovers, to be determined. But we certainly see customers having stretched a very large commercial installed base for some time.

Jeffrey W. Clarke - Dell Technologies Inc. - Co-COO & Vice Chairman

Yes, I might add since the question was how do we view ourselves going into the pandemic and coming out. We were taking share before the pandemic. We took share through the pandemic. We expect to take share after the pandemic. We are a consolidator. We were consolidating before, through and after. We'll continue to focus on the differentiated aspects of our model, which allows us to attach services, software and peripherals and drive differentiated performance with our business, which you saw in the quarter. And we are the revenue leader, which is a tribute to what Chuck said, we focus on the most valuable parts of the market where our model is differentiated and our products have an advantage.

Operator

And we have a question from Tim Long with Barclays.
Could you talk a little bit you mentioned APEX Cloud Services and some mentions of the other service platforms. Could you just give us a sense as to kind of scale of those businesses now? What inning are we in? And do you think this is being aided by the macro and maybe touch a little bit on profitability for these businesses as they scale?

Anthony Charles Whitten - Dell Technologies Inc. - Co-CEO

Yes. Thanks for the question. Let me share what I can. Look, we continue to be really pleased with our APEX strategy and performance. We're seeing really healthy customer interest and growth, particularly in this economic environment where customers are looking to stretch every IT dollar and they're looking to optimize cloud spend. Look, as we've highlighted in the past, our focus is on trying to offer customers choice across our portfolio and steadily building the customer base and our ARR while driving technical milestones. So on the latter, we made an important series of APEX announcements at DTW last week, including a number of differentiated multi-cloud solutions, APEX cloud platforms, APEX Storage for Public Cloud and our APEX Navigator offering. And then we extended our APEX portfolio across our entire business with the addition of APEX Compute and APEX PC as a Service.

So it is now the most comprehensive as-a-service and multi-cloud portfolio in the industry and we're getting a lot of client and customer interest in that offering. We're just going to continue to focus on customers. We'll continue to provide periodic updates on our progress, like we did last year in terms of the size of the business. But for now, we're just focused on expanding the portfolio and the customer interest we're seeing.

Okay. And just profitability as that ramps, if you could touch on that.

Anthony Charles Whitten - Dell Technologies Inc. - Co-CEO

We're not disclosing financial parameters around the APEX business, as we've said. We'll do that periodically when we have meaningful milestones to report as we did last year in Q2.

Operator

And our next question will come from Sidney Ho with Deutsche Bank.

Shek Ming Ho - Deutsche Bank AG, Research Division - Director & Senior Analyst

I want to go back to ISG. Server revenue was obviously not weaker than storage, as you can expected. You guided ISG to be down low single digits sequentially in the second quarter. Do you expect the trajectory to be different between server and storage? Maybe talk about some of the trends you see in the first month of the quarter, and also, I want to ask about, are you still thinking the group ISG being down mid-teens percentage for the year as you allude to a quarter ago?

Anthony Charles Whitten - Dell Technologies Inc. - Co-CEO

Maybe I'll start with just the demand environment, and Yvonne can talk about the specific components of the guide. Look, it just remains a challenging demand environment clearly on ISG. The caution that we saw enter the spending environment in Q2 of last year continues a year later. Customers aren't outright canceling digital projects, but they are prioritizing spend and they continue to constrain investments in infrastructure hardware after the burst of pandemic spending the last couple of years. If you look specifically at servers, the most acute demand challenges are
in the large bids with the largest customers. That reflects that tightening budget environment, and we’re seeing lengthening decision timelines. And look on storage, as we cautioned during our Q4 earnings call, it’s not immune to the IT cycles. It typically lags servers, but it’s never fully insulated. And after seeing slowdowns in small and medium business in Q4, we saw a slowdown in larger customers in Q1. So you take our Q4 and our Q1 storage results together, we’re clearly seeing a lull in the storage market. And so that's what’s inputted into our guidance of ISG, down in the low single digits in Q2, which just sort of reflects that continued cautious spending environment.

**Yvonne McGill - Dell Technologies Inc. - Corporate Controller**

Yes. And Chuck, I’d add, I think that continues through the -- in our guidance for the rest of the year. As you articulated, servers slowed earlier than storage, and we started seeing storage slow in Q4. So we’ll see those both improve as the year goes on sequentially. But obviously, storage is -- was trailing from an improvement standpoint as we would normally see cyclically.

**Operator**

We'll now take our final question from Krish Sankar with TD Cowen.

**Eddy M. Orabi - TD Cowen, Research Division - Research Associate**

Eddy, on behalf of Chris. Your competitors in storage have expressed positive views on QLC NAND and its potential to replace hybrid and HDD storage system. Given your company’s size and exposure to these types of systems, I’m curious to know your thoughts on QLC. I know you guys have a QLC product that you announced last year, but -- do you think other QLC systems are likely to compete heavily on price with hybrid and HD systems on a 30-gigabyte basis?

**Jeffrey W. Clarke - Dell Technologies Inc. - Co-COO & Vice Chairman**

Yes. Over time, absolutely, which is why we're pursuing it a year from others. We'll continue to build across our portfolio. Today, given the compressed pricing of NAND, you don't necessarily need QLC to meet those cost targets or price targets. But we're well aware of the dynamics. And I think, have a very good understanding of the technology, given our storage portfolio and our aggregate buy across NAND in our sector is, I think, the largest. We understand the dynamics and plan accordingly.

**Thomas W. Sweet - Dell Technologies Inc. - Executive VP & CFO**

Well, thanks, Jeff. And so let me do the close here. So all of you probably know at this point that I did announce my retirement from Dell at the end of the second quarter. So including today's call, this is my 38th earnings call as the CFO of the company. And so it's obviously been an amazing journey as we've transformed the company and created shareholder value over the last decade or so with our solution capability, the EMC merger, then the latest being our spin out of VMware as our shareholders. And we also have evolved our technology vision. We're #1 in virtually every category, and we're clearly at the center of our customers' digital journey.

So I'm pretty proud, and incredibly proud, I should say, of the team and the company and what we've been able to accomplish. But I also want to just say thank you to all of you for your feedback, your partnership and your deep relationships that we've had with the investment community. So I'm going to leave the company in strong hands with a great team and great hands with Yvonne as she steps into the leadership role as the CFO. And obviously, I'll be cheering the company on as we move forward. So let me just finish by saying thank you, thanks for your support and your trust over the last decade. So talk to you guys at some point in the future. Take care.
Robert L. Williams - Dell Technologies Inc. - SVP of IR

All right. Thanks, Tom. That wraps the call today.

Operator

Thank you. This concludes today's conference call. We appreciate your participation. You may disconnect at this time.