Q3 2022 Snowflake Inc. Earnings Call

SAN MATEO Apr 21, 2022 (Thomson StreetEvents) -- Edited Transcript of Snowflake Inc. earnings conference call or presentation Wednesday, December 1, 2021 at 10:00:00pm GMT

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Presentation

Operator

Ladies and gentlemen, thank you for standing by, and welcome to the Third Quarter Fiscal Year 2022 Snowflake Earnings Conference Call. (Operator Instructions)

I would now like to turn the conference over to your speaker today, Jimmy Sexton, Head of Investor Relations. Please go ahead.

Jimmy Sexton Snowflake Inc. – Head of IR

Good afternoon, and thank you for joining us on Snowflake's Q3 Fiscal 2022 Earnings Call. With me in Bozeman, Montana are: Frank Slootman, our Chairman and Chief Executive Officer; Mike Scarpelli, our Chief Financial Officer; and Christian Kleinerman, our Senior Vice President of Product, will join us for the Q&A session.

During today's call, we will review our financial results for third quarter fiscal 2022 and discuss our guidance for the fourth quarter and full year fiscal 2022.

During today's call, we will make forward-looking statements, including statements related to the expected performance of our business, future financial results, strategy, products and features, long-term growth and overall future prospects. These statements are subject to risks and uncertainties, which could cause them to differ materially from actual results. Information concerning those risks is available in our earnings press release distributed after market close today and in our SEC filings, including our most recently filed Form 10-Q for the fiscal quarter ended July 31, 2021, and the Form 10-Q for the quarter ended October 31, 2021, that we will file with the SEC. We caution you to not place undue reliance on forward-looking statements and undertake no duty or obligation to update any forward-looking statements as a result of new information, future events or changes in our expectations.

We'd also like to point out that on today's call, we will report both GAAP and non-GAAP results. We use these non-GAAP financial measures internally for financial and operational decision-making purposes and as a means to evaluate period-to-period comparisons. Non-GAAP financial measures are presented in addition to and not as a substitute for financial measures calculated in accordance with GAAP. For the reconciliations of these non-GAAP financial measures, please refer to our earnings press release distributed earlier today and our investor presentation, which are both posted at investors.snowflake.com. A replay of today's call will also be posted on the website.

With that, I would now like to turn the call over to Frank.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Thanks, Jimmy, and good afternoon, everybody.

We saw momentum accelerate in Q3 with product revenues growing 110% year-on-year to $312 million and remaining performance obligations growing to $1.8 billion. The net revenue retention rate expanded to 173%, and we recorded our first positive non-GAAP operating income in the company's history. Our Q3 Fortune 500 customer count totaled 223, increasing by 8 in the quarter. And we now have 148 customers with trailing 12-month product revenue greater than $1 million. Our growth is driven by a diverse mix of customers. The 10 largest consumers in Q3 include 4 Fortune 500 companies, 4 companies less than 10 years old and a Powered by Snowflake program partner.

We continued our international expansion with product revenue from EMEA and Asia Pacific outstripping the company's year-on-year growth, up 174% and 219%, respectively. We recently launched operations in 3 new countries: Israel, Korea and the United Arab Emirates. Vertical industry focus is an important evolution of our selling motion, especially in global enterprise accounts.

During the quarter, we announced 2 industry data clouds. The financial services data cloud brings together the Snowflake platform, partner solutions and industry data to help financial services organizations mobilize their data. Customers can launch products, build fintech platforms and accelerate their compliance on top of Snowflake. Industry-leading customers, Allianz, BlackRock, Capital One, New York Stock Exchange, Refinitiv, Square, State Street and the Western Union are all part of the Financial Services Data Cloud.

We also launched a media data cloud, which enables media and advertising companies to share data for audience insights and measurements. With data clean rooms enabled by Snowflake, advertisers, agencies and publishers can design their own collaborative environment. The media data cloud includes industry leaders like Disney Advertising Sales, Experian, Horizon Media and The Trade Desk. We're teaming up with Disney Advertising Sales to provide the infrastructure underlying their new data clean room solution. Together, Snowflake and Disney Advertising Sales enable data collaboration for compliant and secure advertising.

We launched our Powered by Snowflake program in June to help companies build and promote applications in the data cloud. Powered by Snowflake is designed to accelerate the delivery of cloud applications on Snowflake. To date, there are over 175 Powered by Snowflake companies who have access to technical resources to design their applications. Most recently, we announced Securonix, UiPath, VideoAmp and ZoomInfo as Powered by Snowflake Partners.

In October, we held the Snowflake Build Summit, which focuses on software developers, data scientists and data engineers. The event received over 20,000 registrations, which was 3x last year's Build event. Attendees got a closer look at new applications leveraging Snowpark, which brings programmability to Snowflake and is in public preview. Developers explored how new Java user-defined functions are expanding what is possible with Snowflake.

Updates to the Snowpark Accelerator Program were also announced at Build. Snowpark Accelerated provides partners with access to technical experts and market exposure to Snowflake customers. Snowpark provides programming language choice to Snowflake's data cloud. Customers can access prebuilt partner capabilities and integrations. It is leveraged by companies such as DataIQ, DataRobot and H2O.ai.

At our recent Snow Day Event with more than 23,000 registrations, we announced that our customers can now use Python natively within Snowflake. With Snowpark for Python, developers will be able to easily program with a lightly popular language. They can also leverage the security governance and performance of Snowflake. Snowpark for Python is currently in private preview. During the quarter, Snowflake invested in Anaconda to bring enterprise-grade Python capabilities to the data cloud. Together, we enabled the Python community to build secure data pipelines and machine learning capabilities. The Anaconda partnership will enhance the Snowpark experience to extend programmability with Snowflake.

Last year, we issued our first start-up challenge, 700 companies from 56 countries competed to build a data application with Snowflake. We announced our second Snowflake start-up challenge at Build with an opportunity for up to $1 million in total investment.

Snowflake's Data Marketplace grew 41% this quarter, now with more than 900 data sets from over 200 providers. We also saw a more than 130% annual increase in so-called stable edges. Stable edges are ongoing Snowflake data networking relationships between providers and consumers. One of the feature data sets is FactSet's tick history data feed. It provides asset managers real-time data from over 200 exchanges. ZoomInfo is another feature data set. It provides company and contact data with no additional integration or ETL required.

The overarching backdrop for Snowflake is the inexorable march towards direct-to-consumer operations and full-blown digital transformation. Enterprises and institutions have grown acutely aware how much they will end up relying on data operations, data analytics and data science. Data is becoming the beating heart of the modern enterprise. So the race is on to lay the foundation for a digital data-driven infrastructure, Snowflake is and will be a critical enabler of this journey.

With that, I will now turn the call over to Mike.

Michael P. Scarpelli Snowflake Inc. – CFO

Thank you, Frank.

Q3 was a breakout consumption and bookings quarter for us. Our Q3 product revenues were $312 million, representing 110% year-over-year growth. Consumption continues to be led by our financial services, media, retail and technology customers. Our outperformance is fueled by our existing customer base, which is demonstrated by our net revenue retention rate of 173%. Net revenue retention expansion is driven by rapid growth among our largest customers and the addition of 6 customers to the measurement cohort that have gained greater than $1 million of revenue in the past year.

In Q3, 5 of our top 10 customers grew at or above the company's product revenue growth rate of 110% year-on-year. Q3 benefited from record quarter-on-quarter incremental growth, and we are pleased to see our largest customers continuing to expand their use of Snowflake. Q3 was also an impressive quarter of sales execution. Remaining performance obligations grew to $1.8 billion, with our key industries leading net new bookings. We are also pleased with our progress to mature the sales motion to sell large multiyear deals. In the quarter, we signed a 3-year $100 million deal to an existing customer as well as 5 additional 8-figure multiyear deals. These commitments signal organizations' intent to expand their use of Snowflake and we look forward to seeing their consumption follow.

Of the $1.8 billion in RPO, we expect approximately 55% to be recognized as revenue in the next 12 months. We remain focused on penetrating the largest enterprises globally as we believe these organizations provide the largest opportunity for account expansion. In Q3, the number of customers with greater than $1 million in trailing 12-month product revenue increased to 148, up from 116 last quarter, including 8 consuming more than $10 million.

Q3 was also highlighted by meaningful strides in our partner ecosystem. First, our relationships with our cloud service providers in the field continue to strengthen. This fiscal year-to-date, we have co-sold over $0.5 billion in total contract value with our cloud service providers. Second, we are seeing significant growth from our Powered by Snowflake program, with the number of registered Powered by partners growing 137% quarter-on-quarter and the product revenue from those partners growing 173% year-on-year. Lastly, we are seeing growing engagement within the Data Cloud ecosystem, and we will continue to evaluate strategic opportunities to invest through Snowflake Ventures. In the quarter, we announced strategic investments in Anaconda, OverlayAnalytics and Robly.

The third quarter also saw meaningful gains in profitability and efficiency. On a non-GAAP basis, our product gross margin was 74.6%. Scale, larger mix of compute consumption and increased price per credit related to greater consumption of higher-priced product additions drove the outperformance. Operating margin was 2.5%, benefiting from revenue outperformance and a portion of planned Q3 headcount now starting in Q4.

Our adjusted free cash flow margin was 6.4%, positively impacted by operating margin outperformance. As a reminder, adjusted free cash flow excludes the impact of net cash paid or received on both employee and employer payroll tax-related items on employee stock transactions. This quarter, we saw a $12 million positive impact from those items. We maintained our strong cash position with approximately $5.1 billion in cash, cash equivalents and short-term and long-term investments.

Now let's turn to our guidance and outlook. For the fourth quarter of fiscal 2022, we expect product revenues between $345 million and $350 million, representing year-over-year growth between 94% and 96%. Our forecast calls for our top customers to continue growing from Q3 to Q4, but not at the same record rate we saw from Q2 to Q3.

Daily customer consumption patterns determine our revenue forecast. In many cases, consumption is driven by our customers' own business cycles and growth patterns. In Q4 of last year, some of our largest customers experienced tremendous business growth. With holiday travel returning to a more normal cadence, we also expect a greater impact on consumption in Q4 this year than last year.

Turning to margins. we expect, on a non-GAAP basis, 1% operating margin, and we expect 358 million diluted weighted average shares outstanding. As mentioned earlier, we pushed some hiring into Q4 but still expect to hire more than 1,200 employees in fiscal year 2022.

For the full year fiscal 2022, we expect product revenues between $1.126 billion and $1.131 billion, representing year-over-year growth between 103% and 104%.

Turning to profitability for the full year, we expect on a non-GAAP basis, 74% product gross margin, negative 4% operating margin and 8% adjusted free cash flow margin. And we expect 357 million diluted weighted average shares outstanding. For the remainder of the calendar year, we expect to remain in a predominantly remote work environment with limited travel. Our forecast reflects this plan while assuming an uptick of return to office expenses in the fourth quarter. While we anticipate an eventual return to the office, we do not have a specific time line for that goal.

With the Snowflake Ventures portfolio growing and strategic investments in privately held and publicly traded securities, please keep in mind that we may see quarter-to-quarter fluctuations in our mark-to-market unrealized gains or losses going forward. We expect to recognize noncash gains of approximately $20 million in the aggregate on prior strategic investments based on transactions that have closed so far in Q4.

And lastly, we will host our Investor Day in person, the week of June 13 in conjunction with Snowflake Summit in Las Vegas. If you would like to attend, please e-mail ir@snowflake.com.

With that, operator, you can now open up the line for questions. And as a reminder, Christian Kleinerman, our SVP of Products, will be joining us for Q&A.

Questions and Answers

Operator

(Operator Instructions) We have your first question from Raimo Lenschow with Barclays.

Raimo Lenschow Barclays Bank PLC, Research Division – MD & Analyst

Congrats from me here, the -- on this really strong quarter.

A question for Frank. If I look at the data sharing progress you guys are making, and I'm also looking at some of the industry conferences that are happening this week, where data sharing starts kind of to play a more bigger role, where do you think we are on that journey in terms of other industries discovering the new world where we are living in, in terms of sharing data in the cloud and what's possible and how different business models, different monetization models are possible? Because it feels almost like we're only seeing the tip of the iceberg here.

And then a question for Mike. The gross margins that you're talking about now, is that kind of the way to think about it because you've done a lot of the negotiations? Or is there more room to look for in the coming years?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Raimo, it's Frank. I generally agree with your assessment that we are just seeing the tip of the iceberg. Snowflake was built from the ground-up as a data sharing platform, and we've been at it from the beginning. And you see a lot of other players following our lead in this regard. But we are in the beginning. What happens a lot in our field, in our business is that people look at modernizing legacy workloads. And those kinds of things often have priority over getting to data sharing because we can't even consider data sharing unless we get our data to the cloud. We start moving that workload, we migrate the databases and so on. So yes, we are in the very early stages.

But as you see from the metrics that we report on, there is a very, very steady aggressive growth happening quarter-on-quarter. But we sort of haven't reached that tipping point yet, where sort of the floodgates are open and things are just expanding at a meteoric rate. But we're anticipating that, that will happen at some point. It's very nonlinear in the way the adoption is going to develop.

Michael P. Scarpelli Snowflake Inc. – CFO

Raimo, on your question on gross margins, I'm not giving guidance for next year or the longer term. We'll update that in June. All I will say is we still have a number of deployments around the world that are not at scale, which there is upside in our margins from that, coupled with, as we get into these larger customer relationships that are going with our higher-edition product, they do attract higher margin. Consistent with what we said when we were going public, I don't think this is ever going to get into the mid-80s, like some of the other SaaS companies. But clearly, our longer-term guidance was 75, and there's upside to that.

Operator

We have your next question from Kirk Materne with Evercore ISI.

Stewart Kirk Materne Evercore ISI Institutional Equities, Research Division – Senior MD & Fundamental Research Analyst

Congrats on the quarter. Frank, I was wondering -- actually, I'm going to follow up a little bit on Raimo's question. Are there any industries where you're starting to see network effects take hold in terms of data sharing? I know you guys have taken a little bit faster posture in terms of going more verticalizing sort of your go-to-market. I was just kind of curious, in areas like financial services, are you starting to see sort of network effects build based on sort of getting some of those really key or core accounts?

And then just for Mike, can you just give us an update on where you are from a hiring perspective as we head into next year, especially around sales capacity and things like that?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes, Kirk, it's Frank. Yes, you definitely see network effects, not so much by enterprise, by institution, but really by industry. Because the industry and sub industry, they really induce and evoke the network effect because the entities have relationships and do business together.

So some of the data clouds that we announced during the quarter, like the financial services data cloud and media and advertising, there is a huge amount of network effect in that area. And advertising for a lot of reasons that people know is under enormous pressure. So there is this whole movement of foot to enrich data for advertising yield and effectiveness. And when we're trying to enrich data, that then triggers data sharing and data attribution type of strategy. So it's very strong there.

But there is a difference in between industries. Some industries are very leading edge. They're leaning in very, very hard. Now others just take longer. And you also see by geography, it's different as well. Europe and Asia are running whatever, 18, 24 months behind you or so. But everybody is going to get there, just some are just more upfront than others.

Michael P. Scarpelli Snowflake Inc. – CFO

And Kirk, on your question on the hiring, I want to start by saying we're all about quality rather than quantity of people, and so we're very selective. We are slightly behind, but we're more than making that up this quarter. And as I said in my prepared remarks, we do expect to hire net 1,200 people this year, and we're happy with the people we're hiring, but we will not sacrifice quality over quantity.

Operator

We have your next question from Derrick Wood with Cowen.

James Derrick Wood Cowen and Company, LLC, Research Division – MD of TMT – Software & Senior Software Analyst

Great. Amazing quarter. I guess, first one for Mike. I mean this kind of revenue outperformance is kind of above the parameters we've thought about, certainly above what we've seen in the past few quarters. What were the biggest outside drivers? And what developments really led to this particularly -- particular quarter having such strong upside?

Michael P. Scarpelli Snowflake Inc. – CFO

What I would say is it was really driven by some of our largest mature customers, with some things that was unique to their business that kind of surprised us on the upside. I don't think you're going to see that same repeat of a beat. At least I'm not expecting that. I'm sure you guys would love it, but I just don't see that happening in this quarter. As I said before, a 5% to 7% beat is a big beat for us with our model. So it was exceptional performance last quarter. I'm actually disappointed we outperformed that much, to be honest with you.

James Derrick Wood Cowen and Company, LLC, Research Division – MD of TMT – Software & Senior Software Analyst

Well, it's a good problem to have. Yes. Well, that's good color. Maybe, Frank, you called out this media data cloud and how you're helping advertisers and marketers harness more first-party data is what I've read in that release. And I guess given all the developments going around IDFA and cracking down on third-party and really the push to try to monetize first-party, what kind of opportunity do you see in collecting and powering that first-party data in the media and entertainment and other B2C industries?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

It's really rippling through the entire economy, right? I mean you really got to sort of view this in the context of the whole world going direct to consumer. Every industry is to -- even people that have historically not been direct to consumer are moving towards direct-to-consumer that will obviously triggers enormous investments and people trying to get up to speed on data operation, data science and being able to run a real data-driven enterprise.

In order to do that, we need to have very, very, very refined data enrichment strategies to really tune and optimize and make these relationships work. And that's what's fueling this enormous focus on data sharing and being able -- people being able to enrich their data with attributes that come from other sources.

So the ability to own your own data as an institution, as an enterprise and to fully operationalize and mobilize, is going to become incredibly important. I mean even industries that historically have not been direct-to-consumer, and think of retail and things of that sort, retail, obviously, in the brick-and-mortar type, they're all changing now under the influence of the likes of Instacart and DoorDash. So it's all changing. So the interaction method becoming digital, just is a real tailwind for companies like Snowflake.

Operator

We have your next question from Kash Rangan with Goldman Sachs.

Kasthuri Gopalan Rangan Goldman Sachs Group, Inc., Research Division – Analyst

Thank you very much for a spectacular quarter. Frank, curious to get your thoughts on the Fortune 500 account base that you have, you have 223 customers. You also have at the same time about 148 customers that are doing over $1 million in product revenue. What is the overlap here? How much more of a potential do you have in the Fortune 500 space?

Because I'm surprised that you look at the overall revenue of the company divided by the number of customers, it's about -- it's a relatively smaller number relative to where the company can gain in terms of market share versus broader enterprise software companies, but generally could sell up to $1 million per account. It seems to me that the penetration of wallet share is quite low, which leaves a lot of opportunity.

Can you just address that overlap between the $1 million customers and the Fortune 500 base and how much more potential there is with large accounts?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes. Kash, I agree with your statement. I mean, we are -- we have footprint, but we're very marginally penetrated, which is great. That's exactly what we look for. We typically -- when we started out with customers, whether it's Fortune 500 or otherwise, it's whole process that spans a long period of time. It's a journey. It's a relationship that you're going their legacy workflows, their new projects and then it's something that grows and grows and grows. And you very clearly see that in our net revenue retention rates, that people are literally evolving and learning and expanding as they go along. They may not have a very clear view of what they will be doing when, but they're literally learning and exploring as they go along.

The other thing that I would say is that we shouldn't sort of view things in the historical way that all the money is going to come from Fortune 500 companies. That is absolutely not the case. I mean you'd be stunned if you look at the number of customers who are not Fortune 500 and how high the revenue contribution is. And that's because these are newer enterprises, they are more in the cloud, digital direct-to-consumer oriented, and they have a very different culture towards data and a very different orientation. They will definitely feature very, very prominently in our business mix. It doesn't mean that Fortune 500 isn't important. It obviously is. But their adoption as traditional enterprises is often not as fast as the newer entities that we're dealing with.

Kasthuri Gopalan Rangan Goldman Sachs Group, Inc., Research Division – Analyst

One follow-up for you, Mike, very quickly. As a result of the profitability inflection that we're seeing in the business, does that make you more confident in maybe potentially think about raising the long-term cash flow margin growth that you outlined a few months back?

Michael P. Scarpelli Snowflake Inc. – CFO

We will be updating our longer-term guidance at our Investor Day. I clearly do think there is upside to both our operating margin and free cash flow margin, and we will update it at that time.

Operator

We have your next question from DJ Hynes with Canaccord Genuity.

David E. Hynes Canaccord Genuity Corp., Research Division – Analyst

Congrats on the results, really impressive. Again, like the stand out to me is the net revenue retention. So Frank, I guess the question is, as you think about driving growth in the base, where does the discovery of new use cases typically come from? Is it mostly customer led? How much can sales influence that expansion process? And I guess, like longer term, do you think you have to build out a customer success later over time? Would love to just get your thoughts as you think about how this evolves over time.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Well the -- first off, the entire company is a customer success layer, okay? That is not a department or a function in our world. There are some predictable ways in which things happen. But it depends on the type of enterprises that we deal with. Historically, we've worked on legacy workloads, on-premise workloads, and we have a very predictable pattern moving data to the cloud and migrating databases. That is a tried and true part of our business. Others -- and this is the reason why verticalization is such an important trend, is -- that has very little to do with legacy workloads. It has everything to do with preparing companies for their digital direct-to-consumer futures, whether they're trying to really mobilize data, monetize data and make data really the core of what they're doing.

And that's not just -- those are not just in enterprises that you typically think of. But even in enterprises like in retail, they are traditionally brick-and-mortar. They're becoming very, very focused on their data, on the data that they have, the value that it has and how they monetize that. So these are very, very big things that are happening. Everybody is realizing they're sitting on something extraordinarily valuable if they can enrich it and mobilize it in the right way.

So demand comes from many different places. The sales organizations are -- over the last year, are being redirected really understand the customer's context, what are their challenges, what they're people doing, what are people not doing, how are they approaching it, so that we can bring that value to our customers. So it's no longer hey, here's our architecture versus the next guy, let's benchmark and POC this workload, see how they do. That was historically what Snowflake did. Now we're completely leaned into the customers' context, what are their issues, their challenges. And we are becoming experts at their business.

And that is a big evolution. It's a very exciting because it also elevates us inside the enterprise. We're no longer talking exclusively to IT types and CIOs and so on, but we're not talking to the business side of IT. This is a very different conversation.

David E. Hynes Canaccord Genuity Corp., Research Division – Analyst

Yes, yes. That makes sense. That's helpful color. And then Mike, as a follow-up, so you made some comments with respect to how you're thinking about Q4 consumption patterns and maybe think about complexities and forecasting a business like this.

So I guess the question really is like, do you find that it's getting easier or harder to model the business as it scales? I mean, I feel like on the one hand, you probably benefit from customer diversity and additional data points around usage patterns. But on the other, you're constantly trying to figure out kind of the patterns of new customers. So clearly, some puts and takes there. I would just love to get your thoughts.

Michael P. Scarpelli Snowflake Inc. – CFO

I think it's getting better, and I've been very happy and I think the Q3 performance relative to our internal forecast is specific to some very large customers. Other than that, we've been pretty accurate with what we gave the field at the beginning of the year, consumption by customer or forecast. So I'm pretty pleased with that. And it does get easier as we have a larger and larger customer base. So -- and the beautiful thing is we use Snowflake to help in our modeling. Proof is in the pudding.

Operator

We have your next question from Mark Murphy with JPMorgan.

Mark Ronald Murphy JPMorgan Chase & Co, Research Division – MD

And I'll add my congrats on a thrilling quarter. Frank, I recall that when the pandemic hit about 1.5 years ago, you actually saw pretty healthy consumption trends because companies had to analyze data just to try to respond to the environment. I'm wondering, and Mike, you referenced some activities specific to larger customers, are there any similar developments that are driving extra consumption today or in Q3, for instance, maybe frozen global supply chains or -- are driving activity for retailers or maybe just the new variant in pharma or inflation and interest rate volatility kind of driving some activity in financial services?

Michael P. Scarpelli Snowflake Inc. – CFO

When I look at the outperformance across our company, the outperformance is really being driven by a number of large customers, whose businesses are growing dramatically plus a couple of our Fortune 500 customers that are doing some specific things is really what's driving it. So I can't say it has anything to do with the pandemic supply chain, pharma looking at things based upon the customers that I see that have the really large outperformance. That doesn't mean there's not any of that in our customer base, but I just don't see that as the biggest drivers of our performance.

Mark Ronald Murphy JPMorgan Chase & Co, Research Division – MD

Yes. Okay. And then Mike, as a quick follow-up, when we look at the sequential change in RPO, it's quite a bit larger in Q3 than in Q2. And I was wondering if you can shed any light on that. To what extent is it driven by duration versus the bookings shelf, which I think you've very clearly mentioned?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, if you recall at the end of last quarter, a lot of people picked on our RPO and I said, don't worry it's timing and Q3 was going to have a big quarter of RPO, which we pretty much hit our target internally as to where we thought it would be.

There is timing on -- as an example, our first $100 million deal we did in 2020, clearly, that customer is not renewing every year because it's an RPO. We will do some big deals this quarter, too. I expect Q4 is going to be a big RPO addition. But at the end of the day, it's not RPO in isolation. It's revenue and it's more current RPO that is more meaningful. And we -- that 55% we estimate will be recognized over the next 12 months.

Operator

We have your next question from Gregg Moskowitz with Mizuho.

Gregg Steven Moskowitz Mizuho Securities USA LLC, Research Division – MD of Americas Research

Congrats on the terrific quarter. So we've been hearing more customer anecdotes to the tune of as these companies are growing, they're becoming less confident that other solutions they may be using for data warehousing, et cetera, can handle their future data volumes and performance needs and that, in turn, is driving more business to the Snowflake platform. Is that consistent, Frank, with what you're seeing?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

I generally, I would say yes.

Gregg Steven Moskowitz Mizuho Securities USA LLC, Research Division – MD of Americas Research

All right. That's short and sweet.

And then just as a follow-up, so I wanted to ask about international because the revenue growth that you reported this quarter was pretty stunning. Clearly, that was a primary driver of the product revenue acceleration you showed this quarter. The question here is, are you seeing signs of an inflection in consumption overseas? Or was this more driven by consumption from a few of those larger customers that surprised you this quarter?

Michael P. Scarpelli Snowflake Inc. – CFO

What I would say, first of all, is we saw real outperformance relative to plan and bookings in Asia and EMEA. We also had a very, very strong North America, but off a much higher plan. Yes, in our top 10, we have 1 European customer that is our largest and is growing very, very fast. But still, the majority of our growth in revenue is coming from our North American customers. But we do see next year and beyond, EMEA in particular, and Asia starting to drive some of that as well, too.

Operator

We have your next question from Brad Zelnick with Deutsche Bank.

Brad Alan Zelnick Deutsche Bank AG, Research Division – Head of Software Equity Research & Senior US Software Research Analyst

And just phenomenal quarter, unbelievable results, even though I know, Mike, you're disappointed in how good they are.

Maybe a question for you, Mike. I think you called out, if I got it right, $0.5 billion booked in partnership with CSP partners. And I just wanted to ask how has -- obviously good, but how has the evolution of the go-to-market been with those partners? And specifically, customers when they consume prepurchased cloud credits by way of the CSPs, does that ever hit your RPO? And is that a factor we should be thinking about?

Michael P. Scarpelli Snowflake Inc. – CFO

So first of all, I think it's going well with some of the CSPs and of that, and as I said, it was over $0.5 billion to date that we co-sold with them, I would say AWS is the majority of that followed by Microsoft. Google is pretty much 0 in that co-sell, but we still are adding more and more. Our number of customers in GCP continues to increase. And sorry, Brad, what was the other part of your question?

Brad Alan Zelnick Deutsche Bank AG, Research Division – Head of Software Equity Research & Senior US Software Research Analyst

It was just if customers consume prepurchase cloud credits that they have?

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. So some customers choose to go through marketplace. Others choose to go direct. They generally choose to go to marketplace so they can draw down their commit with the cloud provider, that would still show up in RPO because we still get the contract from the customer. We just do the invoicing and everything through marketplace for them.

Brad Alan Zelnick Deutsche Bank AG, Research Division – Head of Software Equity Research & Senior US Software Research Analyst

Got it. That's helpful. And maybe just a quick follow-up, perhaps for Christian. I just look back historically and price performance has always been a key purchasing criteria in the database market. And I feel like Snowflake has done a phenomenal job elevating the discussion to a much higher plane. But I noticed of late, there have been some competitive claims regarding performance. I'm just curious if a, how much of a priority or criteria is this across your typical sales cycle? And b, what if anything, should we know about TPC benchmarks in Snowflake's competitiveness from a performance perspective?

Christian Kleinerman Snowflake Inc. – SVP of Product

Yes. So Brad, Christian here. I think that at all points in time in Snowflake, we're investing in performance. Every part of the system is getting faster and lower latency. But we're always looking at is the price performance of customer workloads. Many of us at Snowflake, have been in the industry long enough to know that the TPC benchmarks end up being a game of synthetic evaluations, that very quickly get the awards from customer benefits. And at Snowflake, we're 100% focused on price performance for our customers, but it's not just price performance. It's everything else. It's the collaboration and the data sharing that was mentioned as well as the data governance. That's how we think about the broader data cloud.

Operator

We have your next question from Kamil Mielczarek with William Blair.

Kamil Mielczarek William Blair & Company L.L.C., Research Division – Research Analyst

Congrats on another incredible quarter. So I have a follow-up on some of the comments you made on the Fortune 500 customers. So now close to half of them -- well, you have close to half the Fortune 500 customers today, but only about 15% of them are generating $1 million or more in revenue. So is it fair -- is it a fair expectation that most of them can reach and exceed that $1 million level in the next few years?

And secondly, you said that it takes about 9 months for new customers to reach that contractually targeted revenue. For your $1 million customers, how long does it take on average for them to move from that contract signing to that $1 million? And given you're landing larger customers now, do you expect that duration to come down over time?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, it depends on the customer. Most customers don't sign a $1 million capacity one deal. They typically will sign -- I think if you look at it, our average deal size is somewhere around $50,000 initially signing a customer. And so clearly, it takes some time. Yes, we signed some large customers. And Cap One is, but on average is not.

We think on average, when we laid out our model at our Analyst Day last year that we think we can get to our customers paying us over $1 million a year on average, that will be $5.5 million. Right now, that 148 customers on average is $3.5 million. Clearly, the fact that we have 223 Fortune 500, those are only on average right now, doing $1.25 million. There's a lot of upside in those numbers because it takes time to ramp these guys and all of those have been added in the last couple of years, and it will take time.

Kamil Mielczarek William Blair & Company L.L.C., Research Division – Research Analyst

That's great color. And just as a quick follow-up, it's nice to see the positive operating income. We've talked in the past about Snowflake being in growth mode. So given now you've broken even, can you update us on how you're thinking about balancing margin expansion versus reinvesting in the business? And specifically, your headcount growth is roughly in line with last year. Can you can we see that accelerate if your margin starts to expand faster than expected?

Michael P. Scarpelli Snowflake Inc. – CFO

So we laid out our long-term model at our Analyst Day last year. We will update that again in June. But I will reiterate again, we are a growth company, but it's not growth at all cost. We will only spend money if we think it makes sense. And as I said before, we are hiring what we think is the right pace to get quality people in the door.

Operator

We have your next question from Brent Bracelin with Piper Sandler.

Brent Alan Bracelin Piper Sandler & Co., Research Division – MD & Senior Research Analyst

I guess I'm going to stick with the thread of accelerating product growth, rarely do we see companies at this scale delivering the accelerating growth. I know you called out large customers, called out a couple of special projects within the Fortune 500. But as you just think about the composition of consumption in the quarter and the acceleration outside of those things, do you think the business could have accelerated even at and maintain triple-digit growth even without those anomalies this quarter? Just trying to double-click around the acceleration you saw on the product side.

Michael P. Scarpelli Snowflake Inc. – CFO

Well, our overachievement is partially driven by these large customers. We did see generally across the board, most of our customers have been exceeding their targets. Yes, there are some that are down, that happen every quarter, but there's a lot more that were above their forecast. So it's hard to say, Brent, but yes, I do think we still would have -- if I pulled out a couple of those big customers, with their growth, we still would have been over 100% growth.

Brent Alan Bracelin Piper Sandler & Co., Research Division – MD & Senior Research Analyst

Perfect. Very clear. And then just you mentioned product add-ons as one of the contributing factors to improving product gross margins this quarter. Could you maybe give a little color on what 1 or 2 of the more popular product add-ons that are kind of...

Michael P. Scarpelli Snowflake Inc. – CFO

We really don't -- we have 1 product, Brent. I said product addition. So we have -- if you recall, we have standard enterprise business critical. And yes, we have Virtual Private Snowflake too, but not as many customers use that because they're comfortable from a security going with business critical. And it's more of our larger customers using enterprise or business critical that drive margin. And those additions have more features associated with them.

Operator

We have your next question from Tyler Radke with Citi.

Tyler Maverick Radke Citigroup Inc., Research Division – VP & Senior Analyst

Just wanted to go back to the outperformance that you saw with these 2 customers. Just wanted to clarify, Mike, was it something that was kind of onetime in nature? Was this just projects that happened lot faster and so kind of the new run rate is faster, and you're just not expecting that type of dynamic to play out going forward?

Michael P. Scarpelli Snowflake Inc. – CFO

One of the customers I know, does a big project every year at that time of the year, and it seemed to have consumed more. The others, I just don't expect them to grow. They're still going to grow their consumption, but I don't think they're going to grow their consumption at the same rate, and a lot of that is because we are seeing and we did see over the Thanksgiving holiday more people take vacation and at our customers, which does have an impact on their business and how they use Snowflake. And we do expect, over Christmas, there's -- and New Year's, there's going to be more people as well taking more vacation. And we do recognize revenue on a daily basis and we do see dips in our customer consumption on those days. This is the highest holiday quarter of any quarter.

Tyler Maverick Radke Citigroup Inc., Research Division – VP & Senior Analyst

Yes. Helpful. And maybe this one is for Frank. I mean, clearly, the results are really strong. Nothing to really pick at. I think when you talked about some of the vertical, you called out media tech, retail that were particularly strong. If you think about maybe the verticals that were less strong, like what's the biggest thing holding folks back? Is it budget? Is it just kind of internal process change? Hiring environment? Just give us a sense on the customer constraints in verticals that are maybe not as strong.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Well, I mean there are verticals like, for example, I mean, we talked about this on previous calls, the contribution we're getting from public sector is not where we think it will eventually be under real structural reasons, why that is so. And we're solving for those issues, and that business will come along. But there is a lot of friction. I mean we're dealing with infrastructure that has existed for a very long period of time, is completely grafted into operational processes.

You don't just unplug that stuff and plug something in and you're off to the races, right? These are generational shifts and transitions that enterprises are taking. So it's not like throwing a switch, these are very, very carefully orchestrated transitions over a long period of time. It takes a lot of resources. It takes a lot of people. And then once they sort of get to the other side, yes, then you see the acceleration happening. We see that over and over. And once they are replatformed, all of a sudden because of the nature of the Snowflake platform itself, sky's the limit because they're just -- the platform is so accommodating of so many different workloads, and it just works.

So then the friction is -- and we've gone from a lot of friction to almost no friction, which sometimes to our customers should run -- because things are running away from them maybe a little bit too quickly, and we help them with that. But that's really what Snowflake does. Once you get on the platform, the friction is very, very low to spinning up new workloads and new projects and new programs, and that's what you see us benefiting from.

Operator

We have your next question from Keith Weiss with Morgan Stanley.

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

I think this one is for Mike. But when I'm looking at your guys' results, I mean, you guys have been doing really well for an extended period of time. And this quarter was pretty remarkable. But it seems to me like in the last 2 quarters, you've seen, if anything, like an upward inflection in terms of the dollar-based net expansion rate improving. And Mike, your willingness to kind of bring up the sort of out quarter guide and sort of like it's more of a beat and big raise cadence now than it was in the initial quarters out of the gate.

Is there something that changed 2 quarters ago that give you guys more visibility or more confidence in the business or that inflected in the business that explains what we're kind of seeing in the numbers here?

Michael P. Scarpelli Snowflake Inc. – CFO

I think it's a couple of things. One, we talked about that when Frank came on board pre going public, we really shifted to going after some of the largest companies in the world, not that we weren't going after them before. But I would say we more aggressively -- the way we line up our sales force. And it takes a number of years to ramp those customers, and we're seeing a lot of these companies starting to mature right now to a lot of the things we've been doing. With new product features like Snowpark. And the power buy, we're seeing the benefits of that taking place. And not to mention the network effect with data sharing and other things that we're starting to see that in the stable edges.

It's kind of starting to come to fruition. Verticalization is the other one, too. That whole media cloud, that is a huge thing for us. Not to mention financial services cloud. And I think we're getting much better, our salespeople, at selling the business value into those verticals.

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

Got it. And then maybe one follow-up. If there are investor concerns around Snowflake, and there's not too many investor concerns, but it's -- within consumption models, the bills could build up pretty quickly. And you guys see that in terms of your customers get pretty -- some of your customers get pretty big, pretty fast. But we've seen an example of where customers get sticker shock over time, and it becomes kind of bad marketing and difficult for companies to deal with.

How do you guys avoid that? How do you sort of ensure that your customers are seeing value from the solution but don't get that sticker shock that the consumption model could bring and they're using more of this than what we had expected?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

This is Frank. One of the great things about running a consumption model is that we charge back who is spending the compute, which business unit. So business units can decide where they want to run those workloads, how often they want to run it, how they want to provision it. So they're really in charge. It's not sort of a runaway utility model. People can selectively decide which workloads they want to run and what is the business case for it. And that's the way it's supposed to work.

That really mitigates the sticker shock. If people can make investment decisions as they go along and as who owns it. We're seeing with some of our large banking customers, they went from recomputing loan rates on a monthly basis. They're doing it every night. Well, they had a business case for it. Does it cost money? Yes, it costs money.

So in other words, what's really happening is, in the beginning, people have sticker shock, yes. Because the build goes from 1x to 2x to 10x, whatever it is. We're really resetting what is normal and what is appropriate spend for this class of computing. It is very different than what it historically has been, because of hey, what we're now capable of, but also the necessity. Given the comments that we made earlier about direct -- the trend of direct-to-consumer, full-on digital transformation. I mean you can choose to sit on your heels and wait it out, but I won't recommend that.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. I'll also add, too, is we really stress with customers to take training on how best practices around how to use Snowflake, how to optimize your queries. And we go into our largest customers. And I'll tell you, last quarter, 1 of our top

10 customers, we saw a big decrease in their consumption more than what we were forecasting. Why? Because our RSAs went in there and helped optimize that customer. But you want to know what, when we do that, that customer then moves more workloads. And we're seeing this quarter already, they're tracking ahead of our forecast because they're using it in a more optimized way, and the customer sees the value they're getting out of Snowflake.

Christian Kleinerman Snowflake Inc. – SVP of Product

Let me add a quick comment. Also on the topic of performance, we are very intentional that each time that we make the system faster, we're improving also the economics of Snowflake. And we hear very consistently from our customers that those are very welcome surprises, where the economics of the platform are getting better without having to do any upgrades or changes to their platform.

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

Congratulations on the awesome quarter.

Operator

We have your next question from Gray Powell with BTIG.

Janet Zhang

This is Janet Zhang on for Gray Powell. Congrats on the quarter.

So I was wondering, what do you think is the best forward-looking predictor of revenue? I know last quarter, there was a focus on RPO, which can move around. So how much weight do you think we should put on things like RPO or customer adds versus just the pace of net new product revenue in a good quarter?

Michael P. Scarpelli Snowflake Inc. – CFO

And I would say the first thing is that the guidance we give. The second thing is historical revenue growth patterns, coupled with the current portion of RPO to build your models.

Operator

We have your next question from Karl Keirstead with UBS.

Karl Emil Keirstead UBS Investment Bank, Research Division – Analyst

Great. Maybe I'll direct this one to Christian. The data science ML workload opportunity seems to be huge. And I think everybody on this call took notice of your data science-related announcements at your recent Snow Day. I just wanted to ask you how ambitious Snowflake is about going after those workloads? And how willing are you to go up against the likes of Databricks, DataRobot, DataIQ and others? Or do you view them more as partners?

Christian Kleinerman Snowflake Inc. – SVP of Product

Yes. Karl, the way we think about it is we want to help our customers bring the computation, to do data science and machine learning, onto Snowflake so that they don't have to copy the data out and miss out on the benefits of data governance, et cetera. As such, the big investments we've done have been all around extensibility. That's where you see Snowpark. That's easy pipeline. And we're partnering with all of the companies that you mentioned for them to drive consumption and compete on Snowflake. So what we want is to have those solutions come and run natively on public.

Karl Emil Keirstead UBS Investment Bank, Research Division – Analyst

Okay. Got it. Good luck casing that opportunity, it seems material.

Christian Kleinerman Snowflake Inc. – SVP of Product

It's very large, yes.

Operator

We have your last question from Brent Thill with Jefferies.

Brent John Thill Jefferies LLC, Research Division – Equity Analyst

Frank, look forward to the book. When you think about unstructured data, I know you made an announcement to push harder here, can you talk to us about what you're seeing from customers' interest level? And are you starting to see customers go in production or is that a '22 event?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Thanks for the plug on the book there, Brent. I'm going to ask Christian to address this question.

Christian Kleinerman Snowflake Inc. – SVP of Product

Yes. So unstructured data went into form a figure at our Snow Day. We are seeing quite a bit of adoption. We're seeing images, documents, even speech recordings getting stored into Snowflake. And we're seeing customers start to leverage Snowpark to do programming in Java to get value out of those files. So it's looking pretty good from the early adoption the few weeks that it has been in public preview.

Brent John Thill Jefferies LLC, Research Division – Equity Analyst

And Mike, you mentioned media and financial services as it relates to verticals. If you had kind of the next 2 verticals on ready, reserved to -- ready to take off, what would you say those are, sitting on the tarmac, ready to roll into '22 if you had up and comers?

Michael P. Scarpelli Snowflake Inc. – CFO

I think health care is going to be a big one. I think -- longer term, I do think public sector will be a big vertical we're working on. And retail is a very, very big vertical for us that we'll take. Listen, we're doing well across the board. We're just really highlighting we're doing exceptionally well in media and financial services.

Operator

We have no further questions at this time. Presenters, please continue.

Jimmy Sexton Snowflake Inc. – Head of IR

Thanks, everyone.

Operator

Ladies and gentlemen, this concludes today's conference call. Thank you for your participation. You may now disconnect.