Q4 2022 Snowflake Inc. Earnings Call

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Presentation

Operator

Ladies and gentlemen, thank you for standing by. My name is Brent, and I will be your conference operator today. At this time, I would like to welcome everyone to the Q4 Fiscal Year 2022 Snowflake Earnings Conference Call. (Operator Instructions)

It's now my pleasure to turn today's call over to Mr. Jimmy Sexton, Head of Investor Relations. Sir, please go ahead.

Jimmy Sexton Snowflake Inc. – Head of IR

Good afternoon, and thank you for joining us on Snowflake's Q4 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 fourth quarter fiscal 2022 and discuss our guidance for the first quarter and full year of fiscal 2023.

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 and the Form 10-K for the fiscal year ended January 31, 2022, 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. To see reconciliations of GAAP to non-GAAP financial measures, please refer to our earnings press release distributed earlier today and our investor presentation, which are 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. Good afternoon, everybody. We finished fiscal 2022 for the record-breaking consumption and bookings results. Product revenue surpassed $1.1 billion for the full year, growing 106% year-over-year. Remaining performance obligations were $2.6 billion, representing year-on-year growth of 99%.

Q4 was our strongest bookings quarter to date and included a number of large multiyear commitments. Our net revenue retention rate reached 178%, driven by continued growth from our largest customers. In the quarter, we added 14 Fortune 500 and 21 Global 2000 customers. Key enterprise wins included the California Department of Public Health and KPMG, who is also a new alliance partner. We closed the year with $150 million non-GAAP adjusted free cash flow, pairing high growth with improving unit economics and operational efficiency.

Snowflake's growth is driven by digital transformation and long-term secular trends in data science and analytics enabled by cloud-scale computing and Snowflake's cloud-native architecture. Snowflake is a single data operations platform that addresses a broad spectrum of workload types and incredible performance, economy and governance. As a platform, Snowflake enables the data cloud, a world without silos and the promise of unfettered data science. In the most recent Dresner Advisory survey, 100% of Snowflake customers surveyed said they would recommend Snowflake to other organizations for the fifth year in a row. Our focus is to continually enable more workload types, use cases and data types. This fully aligns with our consumption model, which drives work to the data instead of data to the work.

During the fourth quarter, we announced several product development milestones, including Snowpark, our developer framework that helps data scientists and developers transform and program data. Snowpark for Python is now in private preview, and Snowpark for Java on AWS is now generally available. ITAR, we now support compliance with the international traffic and arms regulations in our Microsoft Azure Government and AWS GovCloud regions, generally available data governance capabilities, including object tagging and conditional data masking. Object tagging, in particular, is important for cataloging of data and resource consumption governance; and continued advancement with higher concurrency and lower latency workloads.

Snowflake data sharing is seeing continued traction in the field. In fiscal 2022, the number of stable edges grew 130% year-on-year. 18% of our growing customer base has at least one stable edge that is up from 13% a year ago. Snowflake Data Marketplace listings grew 195% this year, now with more than 1,100 data listings from over 230 providers. Our Snowflake Data Marketplace fuels our rich application development ecosystem and Powered by Snowflake program. To date, there are over 285 Powered by Snowflake partners, including new members Yext and Habu.

We continue to elevate our go-to-market functions with an industry-specific focus. In the fourth quarter, we hosted our first Media Data Cloud Summit. The event highlighted real-world customer use cases. Companies like Experian, Roku and Warner Music Group showed how they are leveraging the media data cloud to protect consumer data and drive advertising and subscriber growth.

A priority for the year is essentially unchanged and is as follows: first, the enablement and expansion of our workload types. Nothing is more core to our mission to develop the data cloud. The existing workload types, such as data lake, data engineering and data science develop continuously to become more functional, efficient and performing. New workload types will be announced later this year. Our focus on Snowpark and enabling workloads driven by languages such as Java and Python fall under this header.

Today, we announced our intent to acquire Streamlit to accelerate data applications development on Snowflake. Streamlit enables data scientists to build, deploy and share data applications. Data scientists will be able to discover government data to build applications powered by Snowflake. 1.5 million applications have already been built on Streamlit, and we will continue to invest in the open-source framework that developers love. We've agreed to pay $800 million with a mix of cash and stock. The transaction is subject to customary closing conditions.

Secondly, we're expanding our use cases by vertical industry as well as by -- as well as functions such as IT, sales, marketing, finance and engineering. We are continuing to drive collaboration through data sharing with leading enterprise software companies to drive this trend. Third, as of February 1, we have also verticalized part of our selling motion to address our largest customers by industry. Lastly, we'll continue to deepen and broaden our geographical scope, expecting faster-growing contributions coming from outside the United States.

We're excited about starting a new Snowflake fiscal year. With that, I will turn the call over to Mike.

Michael P. Scarpelli Snowflake Inc. – CFO

Thank you, Frank. Q4 was another quarter of exceptional execution and strong finish to our fiscal year. Q4 product revenues were $360 million, representing 102% year-over-year growth. Remaining performance obligations accelerated to 99% year-over-year, reaching $2.6 billion. Of the $2.6 billion in RPO, we expect approximately 52% to be recognized as revenue in the next 12 months, representing 85% year-over-year growth.

For Q4 product revenue, we anticipated holiday season headwinds. However, we did see a slower-than-expected return to normal consumption in January. We also introduced platform enhancements that improved efficiency higher than expected, which lowered credit consumption. Our increased net revenue retention rate of 178% includes 15 new $1 million customers and reflects durable growth among our largest customers. Similar to last quarter, 6 of our top 10 customers' product revenue grew faster than the company overall.

Our industry vertical investments are yielding strong results. Q4 was our largest bookings quarter to date, and the outperformance spanned across all our core verticals. Financial services, retail and CP&G, advertising and media, health care and technology accounted for 85% of net new bookings in Q4. Large deal volume continues to increase in these verticals. In the quarter, we closed 7 deals at or above $30 million in total contract value, up from just 1 in Q4 of last year. Significant contractual commitments give us confidence that our largest customers' consumption will continue to grow. In Q4, we saw a number of customers with greater than $1 million in trailing 12-month product revenue increased to 184 up from 148 last quarter.

Turning to margins. On a non-GAAP basis, our product gross margin was 74.99%, up nearly 500 basis points from last year. Enterprise success and growing scale across regions contribute to steady gross margin improvement. Operating margin was 5%, benefiting from revenue outperformance and hiring linearity.

Our adjusted free cash flow margin was 27%, positively impacted by strong collections and operating margin outperformance. We do experience free cash flow seasonality, and Q1 and Q4 will continue to be our strongest free cash flow quarters. Given the record bookings in Q4, you should expect to see outsized adjusted free cash flow in Q1 of this year. We are proud of our free cash flow progress, and we will continue to invest for growth with a focus on efficiency. We are committed to showing leverage year-on-year. We ended the year in a strong cash position, with approximately $5.1 billion in cash, cash equivalents and short-term and long-term investments. Going forward, we are using our strong cash position to transition to a net share settlement for vesting of employee RSUs in almost all countries. This will help us further manage dilution, which has already been running below 1% year-on-year on a fully diluted basis.

Now let's turn to guidance, which includes the full impact of the Streamlit acquisition. For the first quarter of fiscal 2023, we expect product revenues between $385 million and $388 million, representing year-over-year growth between 79% and 81%. Turning to margins, we expect, on a non-GAAP basis, negative 2% operating margin; and we expect 359 million diluted weighted average shares outstanding. For the full fiscal 2023, we expect product revenue between $1.88 billion and $1.9 billion, representing year-over-year growth between 65% and 67%.

As we have mentioned before, certain product improvements create a revenue headwind for our business. We undertake these initiatives because they benefit our customers and expand our long-term market opportunity. Last year, we called out improvements in storage compression that reduced storage costs for our customers. Similarly, phased throughout this year, we are rolling out platform improvements within our cloud deployments. No 2 customers are the same, but our initial testing has shown performance improvements ranging on average from 10% to 20%. We have assumed an approximately $97 million revenue impact in our full year forecast, but there is still uncertainty around the full impact these improvements can have. While these efforts negatively impact our revenue in the near term, over time, they lead customers to deploy more workloads to Snowflake due to the improved economics.

Turning to profitability. For the full year fiscal 2023, we expect, on a non-GAAP basis, 74.5% product gross margin, 1% operating margin and 15% adjusted free cash flow margin. And we expect 360 million diluted weighted average shares outstanding. Our gross margin guidance includes performance improvements and investments in additional deployments around the world, most notably government deployments and international. In order to support our continued growth initiatives, we plan on adding more than 1,500 net new employees during the year.

And lastly, we will host our in-person Investor Day at the week of June 13 in Las Vegas in conjunction with Snowflake Summit, our annual users' conference. If you are interested in attending, please e-mail ir@snowflake.com.

With that, operator, you can now open up the line for questions.

Questions and Answers

Operator

(Operator Instructions) Your first question comes from the line of Rod Cuestas with Deutsche Bank.

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

It's actually Brad Zelnick for Deutsche Bank. Congrats on an amazing quarter and a strong finish to the year. Mike, I want to drill down a little bit more into the platform enhancements that you talked about that resulted in optimization and consumption efficiency in the quarter. And you mentioned -- I think it had a 10% to 20% impact, and you called out the $97 million that I think you baked in that's going forward. To what extent does that compare to the expectations that maybe you had in your forecast? But more importantly, how should we think about the slope of the curve and cadence of future improvements that clearly benefit the customer but the impact that then has on the model? I guess maybe the confidence that you have in calling out $97 million.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. Good question. So first of all, as an example, for Q4, there was a rollout of what we call our warehouse scheduling service. We only rolled that out in January for 3 weeks, and we saw a $2 million improvement -- or impact, an improvement for our customers using less but doing the same number of queries because they're not -- it's much more efficient when you're scheduling queries to run them and rolling that out for next year. That is much bigger than what we were anticipating, and the full year impact of that next year is quite significant. But what we generally see is when we do these things, there's usually a lag of about 6 months when we start to see more workloads move to Snowflake. And then there's other platform improvements that we're doing that we rolled out in beta in the end of the quarter, and it's starting to be rolled out now throughout the year. And the growth is actually more like $160 million, but I do expect that will be offset by over $60 million in additional workloads coming from our customers.

And in terms of what we were expecting, we knew these were going to come next year, and we never gave any guidance for next year yet. So it's within what we were guiding. I just want to remind people of these.

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

That's very helpful context, Mike. And I mean the growth that you're delivering at scale, I think, is unprecedented. Maybe a real quick follow-up for Frank. As we contemplate the results and the guide for next year, is the Streamlit acquisition, which -- congratulations on it, by the way. Any response to competitive changes in the market? Or is this something that has been teed up and part of the vision for a while?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

All right. Brad, it's Frank. No, this is definitely part of a strategy focus that we've been talking about and making announcements on for the better part of last year, and that's the focus of driving workloads really from the developer to Snowflake. We've been obviously super successful to drive it from the data engineering, data warehousing, data analytics side. But with the initiatives around Snowpark, all the programmability options for us to really address the Python developer community, this is going to be a superb asset for Snowflake. So we have to address workloads across the spectrum, and this is going to help us do that in places where we historically have not been as well represented as we've been in other areas.

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

It's a great asset. Congrats on the deal.

Operator

Your next question comes from the line of Mark Murphy with JPMorgan.

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

Yes. And I'll add my congrats on just a very strong bookings quarter that you're reporting here, especially on the RPO line. I wanted to ask about the comment on the slower-than-normal return to consumption growth in January. Plenty of other software companies saw slower consumption over the holidays. I'm curious, did you get any sense of what occurred in January that might have driven that behavior perhaps relating to Omicron or other factors? And have you seen that change in any direction so far in February?

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. So as I said, we did see kind of a little bit more of a holiday effect going into January. Whether people were taking longer vacations, I don't know. But we did see it return to more normal in January. And you do see about 70% of our work is really driven by machines. The other 30% is humans. And that machine -- and we can see that machine layer stays consistent on a daily basis, and it's the human interaction that changes. And we did see a decrease in human interaction early in January, which leads us to believe people were taking vacations. As an example, last week -- we look at it on a daily basis, was Presidents Week and ski week for a number of people. We see it decrease there as well, too, but then we see a return in a week like this.

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

Okay. Understood. And just as a quick follow-up. I think recently, you've had a favorable spread where retention seems like it's giving you 70 points or more of revenue growth. But you've had -- the product revenue has been growing around 100%. Do you have any sense of how that relationship could end up playing out in fiscal year '23 just given the dynamics with the platform improvements?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, I don't even try to compare net retention with revenue growth rates but I will say -- or definitely, our net revenue retention will go down next year because of all these improvements. It will stay above 150%, but it's not going to stay in the 170s.

Operator

Your next question comes from the line of Gregg Moskowitz with Mizuho.

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

Frank, you mentioned that your -- as of February 1, you implemented changes with respect to verticalizing your sales motion. Can you elaborate on that? It sounds like you're seeing real progress with respect to verticalization. Just trying to get a sense of how substantial these changes may be as you kind of go after that opportunity.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes. First of all, this is not a reorientation of our entire selling motion. It's really the upper stratum in terms of our large account focus. We really replaced the geographical backbone with an industry equivalent of that because we don't think, for a large account, the geographical breakdown really adds anything. We've been talking on this call probably, I think, for the last 4 quarters about how we are really, in all aspects of our business, bringing a much stronger industry aperture to everything we're doing. The sales organization has been working all of last year on making this transition happen. So by the time Feb 1 came around, everybody was fully up to speed, were locked and loaded to let that go.

But the broader context to industry orientation is that our selling motions and really our whole posture towards the industry is really shifting from a workload-oriented way of thinking to really to what are the use cases that the customer needs to address. I will tell you that in my almost 3 years here, initially, I mean all the conversations were around architecture and moving workloads from on-premise to the cloud and how our database migrations are. And today, 9 out of 10 conversations are industry-specific, very, very industry-specific, oftentimes not necessarily with IT types but with businesspeople and data science types. People are really trying to drive predictive insights into the business, things that are becoming possible, have never been done before.

So the company really wants to evolve towards this posture in the marketplace. It doesn't mean that we're going to walk away from workload transition. That is bread and butter. We're going to be doing that for forever literally because we're still in the very early stages of that transition as well. But we think the industry posture is all about us assuming the customer's point of view rather than our own, and we think that's the correct way to do things.

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

Super helpful. And then just as a follow-up. So obviously, having Java available on Snowpark is great. We think eventually getting Python to be GA, is going to become a big deal. And Streamlit clearly enhances your exposure to Python. But what are your expectations of adoption of Snowpark over the next 12 months? How do you see this progressing?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Do you want to take that, Christian?

Christian Kleinerman Snowflake Inc. – SVP of Product

Yes. Sure. This is Christian. I don't know how to project as a percentage of the overall consumption. But if you just look at current adoption, Java is trending quite well. We see migrations from Spark, from Hadoop and other workloads. And I can also share that for Python, right now, we have way more customers requesting access to the preview that we can onboard currently. So they introduced super high. They generate a lot of consumption. Trends are very positive.

Operator

Your next question comes from the line of Keith Weiss with Morgan Stanley.

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

In the guidance, is there a significant revenue contribution? And is there any significant sort of operating margin lag that we could be aware of...

Michael P. Scarpelli Snowflake Inc. – CFO

Keith, your first part of your question was cut off. We couldn't hear it. Could you start from the beginning and rephrase that?

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

Sorry. Yes. So I was just asking about the FY '23 guidance. You mentioned that Streamlit was in the guide but didn't give us much detail in terms of how it was in the guide. Is there a significant revenue contribution or operating margin impact that we should expect from the acquisition?

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. There is about $25 million in expenses associated with Streamlit. There is no revenue. Streamlit has no -- or it's de minimis. It's less than $100,000, and we won't be having a product ready on Streamlit until the end of the year. So we're not factoring any revenue. It could come sooner.

Keith Weiss Morgan Stanley, Research Division – Equity Analyst

Got it. Got it. And then when we think about the impacts from the platform improvements, obviously, you're calling out the revenue impact. From the way that we look at the numbers and the net dollar expansion rate, I would assume that that's also going to see impact. Any way you can help us kind of understand what the impact on that is going to be on a go-forward basis?

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. Well, I did say earlier on one of the questions the net revenue retention is definitely going to come down. We're not going to guide to net revenue retention. It's hard to do. I'll just say it will be above 150%, but it's definitely going to drop below 170%.

Operator

Your next question comes from the line of Keith -- sorry, your next question comes from the line of Kamil Mielczarek with William Blair.

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

Congrats on the strong year. So you delivered very strong net expansion rates, impressively, I think accelerating up an already strong level this quarter. Can you provide some detail around some of the specific drivers? How should we think about the relative contribution among the adoption of these workloads, more data just being loaded onto platforms for existing use cases and maybe expansion into newer departments within existing customers?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, you see the net expansion rate of 178% for the quarter. That is really driven by expansion obviously within existing customers, and it's a combination of new workloads or new divisions within companies. And it's across the board -- new use cases as well, too, in there. I can't give really much more color than that.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Snowball effect.

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

That's helpful. And just a follow-up on the customer count. So your net new customer growth, I think, was down slightly in the last 2 quarters. I realize that the long-term expectation is for Fortune 500 and other $1 million customers to generate the majority of your revenue. I think 77% was the long-term target. How should we think about the pace of total customer growth going forward? Is it beginning to stabilize? And are we getting to a point where maybe you've landed a large portion of the Fortune 500 and the focus begins to shift more from landing new customers and more towards expanding within existing.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. So to be honest, we don't focus on absolute number of customers. It's more on the quality of customers. And as we've talked about before, Fortune 500 is not a great metric because it's too U.S.-centric, and we're actually focused more on Global 2000. It doesn't mean we're not focused on Fortune 500. And I will say Global 2000 excludes the public sector and large private enterprises. So it's really going after -- quality, large customers is what we're going after. And you will see fluctuation in the number of new customers we land in the quarter, but that fluctuation tends to be from small customers.

And I just want to remind you, too. These sales cycles into these large customers, we don't find an opportunity in the quarter and close in the quarter for a new deal. These are 1-, 2-, sometimes 3-year sales cycles to break into these large organizations, and those are the ones that become the $10 million-plus customers. And as I said, we now have 184 paying us north of $1 million a year, and we're very pleased with that growth up from 148. And we see, based upon the ones that are just on the cusp of $1 million, that number will continue to increase.

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

That's great. Congrats again.

Operator

Your next question comes from the line of Derrick Wood with Cowen.

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

First question, Mike, just wanted to touch back on the seasonality and consumption. Can you just talk about how the consumption piece came in versus your expectations? And maybe compare that with how new bookings and sales productivity came in versus expectations.

Michael P. Scarpelli Snowflake Inc. – CFO

I would say the quarter actually came in pretty much where we were expecting, slightly off from consumption in January but not a huge amount. I will say and I called it out, we were surprised at an enhancement we rolled out, the profound impact of it. It was only out for a few weeks in January and had a $2 million impact. Other than that, we landed from a revenue standpoint where we were forecasting and guiding. Where I was really surprised was the strength in bookings in the quarter. You saw that we closed over $1.2 billion in contract value in the quarter, growing our RPO to $2.6 billion. That was well above what we were planning internally. The other thing I want to call out, too, is we co-sold with the cloud vendors, $1.2 billion in contract value for the year as well.

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

Great. Helpful color. And for Frank or Christian, wondering how you're thinking about the opportunity around security. I guess as you look into the new year, I mean how much demand are you seeing around customers wanting to build security data lakes or security analytics on your platform? And is there anything you guys may look to do to lean in more aggressively?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes. We're going to make announcements on this topic later on this year. But that has been raised to priority and focus quite a lot for Snowflake. It's one of the best add-on selling motions that we have in large account. We think Snowflake is just an ideal platform for hosting that type of capability. So you will see us lean into that opportunity a lot more going forward.

Operator

Your next question comes from the line of DJ Heinz with Canaccord Genuity.

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

Frank, a two-parter for you on the data sharing stuff. So the customers that have embraced data sharing, how long does it typically take for them to get there? Like can that happen quick? Or is it typically more with customers that have been on the platform for a bit? And then the follow-up, the part 2 would be how much of an inflection consumption does that typically drive?

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Your first question, most of the time, not all the time but most of the time, customers have other priorities in terms of transitioning their databases and their workloads before they get on to data sharing if they weren't doing that before. But it's also quite possible that we have workloads that are driven by data sharing as a core premise. And obviously, then it's something that is a starting point, and that's something that sort of comes several iterations later. So it all depends. And so historically, our business has been very -- much been a modernization play from existing workloads, and that's where you have to wait some time before people sort of get their sea legs under them and they sort of move on to these opportunities. But that is starting to change. As we said in our prepared remarks, I mean we now have 18% of our customers having at least one stable edge as part of their platform, and that was up from 13% last year. So the data cloud is really happening, and that is what a rapidly growing customer base underneath it.

I forgot. What's the second part of your question?

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

Just how much of an inflection that is in consumption.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Well, it hasn't been an extraordinary inflection in consumption in terms of data sharing, driving consumption per se. But data sharing is a core underlying capability of an overload -- of an overall workload footprint. So it's really important in that sense rather than sort of separating data sharing out as a specific workload driver.

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

Yes. Got it. And Mike, a very quick follow-up for you. Of the $800 million for Streamlit, how much is cash?

Michael P. Scarpelli Snowflake Inc. – CFO

It's roughly 80-20, 80% stock, 20% cash.

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

80% stock. Okay. Got it.

Operator

Your next question comes from the line of Gili Naftalovich with GS.

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

It's Kash here, guys. I'm curious to get your -- despite your best-case scenario for Streamlit, the dream that we envision 2 or 3 years from now, what is Streamlit going to allow Snowflake to pursue in the machine learning data science realm that would consider this to be a success.

And Mike, a question for you. I know that you mentioned that you're passing along savings back to customers, but customers are also coming back and doing more workloads with you guys. So if you can just run to the rationale of why do you think renewal rate, net retention rates are going to go below 150%. Because it's coming off of a very, very high base and you've actually earned the goodwill and trust of your customer.

Michael P. Scarpelli Snowflake Inc. – CFO

I'll answer first, and then I'm going to turn it over to Christian, who is very passionate about Streamlit and what it can do for us. So in terms of your question on the enhancement we're doing, listen, we're running at 178% net revenue retention. These are extremely high numbers, of such big numbers to begin with, those percentages. And just the law of numbers as we have new customers that are coming into the pool that we've -- remember, that looks back 2 years ago, a customer has to be on for 2 years. That number will going to -- will come down. And the efficiencies, we're talking 10% to 15%, 20%. It depends upon the customer based upon the platform. That has to come down, that number. And as I said, it will remain above 150% for quite some time, but I do think it's going to drop below 170% for the full year, on average, next year.

Christian Kleinerman Snowflake Inc. – SVP of Product

Okay. And I'll comment -- Christian here, comment on Streamlit. If you recall at Investor Day last June, we shared our vision to help organizations of all sizes build applications, data applications and data experiences on Snowflake. What we see with Streamlit is their super easy-to-use framework powering all sorts of applications both for internal consumption of data within companies but also coming to our marketplace and helping entire businesses, some of them industry vertical businesses, some of them horizontal experiences, but at the end of the day unlocking the power of data and creating new data experiences.

Operator

Your next question comes from the line of Tyler Radke with Citi.

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

So Mike, your long-term free cash flow guide at Analyst Day was for 15% at $10 billion of product revenue, and it looks like you're guiding to 15% free cash flow margin for FY '23. So maybe just give us a sense for what's driving that big outperformance and how you're able to achieve that so much sooner. Is it mainly the efficiencies that you've discovered over the last year? Just help us understand that.

Michael P. Scarpelli Snowflake Inc. – CFO

A couple of things. We're entering into larger customer relationships, and you can see customers' consumption is picking up and which -- resulting in renewing contracts early, which drives that free cash flow. I do fully expect, as I said on last call, that we will be revisiting our longer-term free cash flow and operating margin guidance. I do expect it will come up considerably. I told you guys before I'm not going to give a number now. And I want to remind people to -- don't be surprised when there's a really big free cash flow number in Q1 because of how big our bookings were. But over the year, that 15% is the full year and there is seasonality with Q1 and Q4 being the highest of the 4 quarters.

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

Got it. And maybe just on the quarter, as you recap this past year, how did kind of the number of replacement deals of a legacy on-prem data warehouse -- how fast did that number grow? And just kind of what are you seeing in the pipeline as well on the legacy replacements?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, most of our net new customers tend to be a replacement of some legacy. Some can be cloud, Gen 1 cloud products as well, too, but most of the large Global 2000 tend to be on-premise replacements. And you can see that in our G2K ads and our Fortune 500 ads. But there is a lot of growth as well within existing customers, and that continues to be very strong for us as well.

Operator

Your next question comes from the line of Raimo Lenschow with Barclays.

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

A quick -- 2 quick questions, if I may squeeze it in. Mike, if you look at other vendors, if they have product improvements that actually saves their customer cost, they usually have like a sharing model of like the customer gains something and you gain something through maybe like price increase, et cetera. Is that something that over time could happen? Or are you really happy to continue to give all the benefits back to customer?

And then for Frank, just briefly, any update on the unstructured data opportunity? Because I remember that was a big focus for this year.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. So our whole philosophy is any improvement we do will benefit the customer but it benefits us long term, too, because anything we do allows them to do more with the credits they bought, the price they pay -- a certain price per credit. They can run more queries per credit they buy. And what happens is when customers see their performance per credit and it's trending, that is getting cheaper for them to run things. They realize they can do other things cheaper in Snowflake and they move more data into us to run more queries. And so we have no intention on, for existing customers, increasing their pricing. What I will say is on new customers coming in, we will be very disciplined around discounting with new customers.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

On the topic, Raimo, on unstructured data, that -- actually, the uptake has been quite strong on that. And we were expecting it and that's exactly what's been happening. I mean there's some really interesting new opportunities where data models are looking for relationships between unstructured data types and other types of data types, things that just weren't possible before that are now enabled by the platform. So we're driving this hard, and we have tremendous expectations for unstructured data in general and the potential for data science, innovation and new data applications also in the context of the Streamlit acquisition. This is going to get very interesting for us.

Operator

Your next question comes from the line of Brent Bracelin with Piper Sandler.

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

Frank, I wanted to go back to the workload discussion. I think one of the things that stood out to us over the last quarter was just the number of enterprises turning to Snowflake for supply chain, customer support, sales enablement, even machine learning workloads. I get data warehouse migrations will be the bread-and-butter business, but how big of an opportunity do you see in expanding the Snowflake footprint into these departmental areas? And how fast is that -- are those workloads shifting to Snowflake? Any color there would be helpful.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

I think it's important for everybody on the call to understand that we are super early innings in terms of the total opportunity and what is -- what people are going to attempt to do with data. That's because the technology is running out front. It's enabling things that have never been done before. Now it's not like throwing a switch and all of a sudden everything is blinking green. We're in conversations almost every day now with customers that are trying to do predictive things with data that they've never done before. And a lot of the challenges they have is with skill sets that translates from their core business to the data side and the gaps that exist there to make that all happening.

So there's this very normal, natural friction in the evolution of that, that we're trying to learn how to do these things. And you see that in the world of machine learning a lot. I mean it gets talked about but it's actually incredibly hard to drive these benefits in a highly predictable manner. There's lots and lots of attempts at it and people are not already on the first attempt, seeing exactly what they were hoping for.

But the march is inexorable in the sense that this is where it's all going. I really think that a lot of the bread and butter that we do today, which is these 24-hour cycles. We're running large, highly scaled analytical batch processes, populating dashboards. When we come in, in the morning, we get to see yesterday's data. That's all fine and good. But that's -- we're running these workloads really, really well now compared to what we were doing in the past, but what is coming in terms of the potential is enormous. And as I said, it is early days in terms of this entire opportunity.

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

Helpful color there. And then just, Mike, a follow-up on platform enhancements. As you think about the impact to the guide, how much of it is mostly the warehouse scheduling feature versus other, let's say, lower CPU pricing resources you're passing on to clients? Just trying to think through what you've baked in. And is it mostly just scheduling or other things as well?

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. What I'd say from the gross impact, roughly 40% is coming from warehouse scheduling; on a net basis, about 30%; and then the balance is coming from other software improvements and hardware improvements that we see happening.

Operator

Your next question comes from the line of Kirk Materne with Evercore ISI.

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

Frank, I was wondering if you can just talk about the GSIs and the progress you're seeing there. I think Accenture had a milestone trained employees pretty recently. Just what can they do for you from this sort of a demand gen perspective in fiscal '23?

And then just, Mike, on the platform improvements, can you just kind of conceptualize to us how you think about that from a return perspective? Obviously, it's a $100 million headwind. This year, I think you mentioned you'll start to see a pickup of 6 months later. How should we kind of think about sort of -- or at least how you think about it conceptually from the kind of benefit you get from delivering those improvement back to your customers?

Michael P. Scarpelli Snowflake Inc. – CFO

So the way we look at it, the benefit is, first of all, the customers see an immediate price performance improvement. And our customers are always looking at price performance. And when they compare our price performance versus running it, whether in another cloud or running it on-prem in their existing data warehouses, they make the move to move more things into it.

As a reminder, we have landed hundreds of customers to do these big, on-prem Teradata migrations. I think we've only completed -- we're completely shut down a little over 30 of those. It's maybe in the mid-30s now. There's piles of other workloads that they plan on moving. And when customers see the price performance, they will accelerate the movement of those other workloads to us. And we have historically seen that. As I said, I do anticipate that we will see some. As a reminder, we see the gross impact of about $162 million for the year, and we think we will make up about $65.5 million in revenue. And a lot of that does -- there is a lag and it depends on the customer. It could be a 1-month lag. It could be a 6-month lag before they realize that and move more workloads. But based upon what we're seeing, we think there will be about $65 million coming back in to get to that net $96.7 million if you want to be precise what we're estimating.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

On your question about SIs, you mentioned Accenture in particular, we're expecting a much higher contribution and partnership with Accenture going forward. We've had outstanding relationships obviously with many others, notably Deloitte. We also announced a relationship with KPMG. It's just the intersection with the large SIs in these large Global 2000 accounts is inevitable. So you will see more and more of that business intersecting with Snowflake and those relationships becoming very, very large over time. Things that we've seen before in other companies is absolutely going to happen for Snowflake as well.

Operator

Your next question comes from the line of Karl Keirstead with UBS.

Karl Emil Keirstead UBS Investment Bank, Research Division – Analyst

Two questions. So Mike, to start, does the Q1 April product revenue guide of $388 million assume a more conservative view on usage ramps given what you flagged in early January? Or does it assume basically a return to normal activity, seasonality?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, it includes a $10 million revenue hit because of these product enhancements that we see. And it's based upon what we're seeing today in terms of how customers are returning after vacations.

Karl Emil Keirstead UBS Investment Bank, Research Division – Analyst

Okay. And then as a second question, if I could just press a little bit on the context to passing on these platform improvements. Companies normally don't willingly make changes that cut 5% out of the revenues. So I'm curious, were you getting pushback from customers around price performance relative to alternative products and you decided to try to alleviate that price pushback by making this change? Like what's the broader context for doing this? Because it's very rare.

Michael P. Scarpelli Snowflake Inc. – CFO

I'm going to let Christian talk from a product standpoint why he and others feel this is very -- and including me, feel this is the right thing to do for our customers and pays off in the long term.

Christian Kleinerman Snowflake Inc. – SVP of Product

Yes. So Karl, we've been doing this since the very beginning of Snowflake. We've always been focused on improving the performance of the system, and we are very cognizant that it improves the economics for our customers. And the rationale behind it is that there's so much more data being created every day. And the more the marginal cost and effort of getting value out of the data decreases, we know that there's a lot more value for companies to generate out of the data. We see it time and time again. The more we improve the economics of the platform, the more use cases come to Snowflake. So we're looking at this with a very long-term view.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes. Let me say one thing. It's Frank. This is not philanthropy. We are very much doing this -- that this stimulates demand. And by the way, we can't prove that to ourselves by going back years because we've done this over and over, and it does stimulate demand but it doesn't do it in real time. There's a lag involved in this process.

Michael P. Scarpelli Snowflake Inc. – CFO

I will add. I think this is probably the biggest magnitude impact at one time in any platform improvements that we've done since I've been here.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

It's also the scale of the business.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. The scale of the business.

Christian Kleinerman Snowflake Inc. – SVP of Product

In recent years, that's true. In prior years, we did similar big things.

Michael P. Scarpelli Snowflake Inc. – CFO

Early on in the company, yes.

Operator

Your next question comes from the line of Phil Winslow with Credit Suisse. Your next question comes from the line of Brad Reback with Stifel.

Brad Robert Reback Stifel, Nicolaus & Company, Incorporated, Research Division – MD & Senior Equity Research Analyst

Mike, I think earlier in the call, you had mentioned about 30% of the workloads are machine to machine. Can you give us a sense of where that's been historically and where you think that can go to over time?

Michael P. Scarpelli Snowflake Inc. – CFO

What I said was about 70% of the queries in the work are machine...

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Scheduled.

Michael P. Scarpelli Snowflake Inc. – CFO

Scheduled. They're not -- you don't need a human to go on a schedule, and these are automated processes that happen because you want to refresh queries every so often. And about 30% is human-driven. And that's been pretty consistent for quite some time, haven't seen any change there.

Frank Slootman Snowflake Inc. – Chairman, CEO & President

Yes. We also think we're projecting workloads also under the influence of Python becoming available and more developer-centric workload coming our way but -- which tends to be more interactive. And if you balance that out with machine learning models that are going to -- that we believe are going to be more scheduled in terms of generating predictive results and so on. So we think that breakdown might well hold over a period of time where we -- obviously, we keep looking at that.

Brad Robert Reback Stifel, Nicolaus & Company, Incorporated, Research Division – MD & Senior Equity Research Analyst

Got it. Sorry for getting that transposed. And one other thing. I hope I'm not trying -- transposing as well. I think you also said that there was $1.2 billion co-sold with the hyperscalers for the year. I think last quarter, you talked about $500 million, which would obviously imply you added $700 million. That seems like a really big number.

Michael P. Scarpelli Snowflake Inc. – CFO

Yes. It was a very -- and we sold, in total for the quarter, over $1.2 billion just for the quarter. And roughly $700 million was co-sold with the hyperscalers. And I will say the vast majority of that is AWS. I would say 0 was GCP, and the balance was Azure.

Operator

Your next question comes from the line of Ari Terjanian with Cleveland Research.

Ari Nareg Terjanian Cleveland Research Company – Research Analyst

Congrats on the close of the year. I just wanted to double-click on international. Could you provide more color if the consumption trends you saw in terms of the holiday seasonality was consistent across geos? And then just more color on your plans for FY '23 and the geographic expansion this year.

Michael P. Scarpelli Snowflake Inc. – CFO

So I didn't really notice anything by geo in terms of differences. And I will admit I didn't really dig into that, but I can't think of anything or I would have heard something from someone. In terms of -- we continue to focus on international expansion. We think Europe is set to have a very good year this year. APJ, we've been investing a lot there. I mentioned we are opening new deployments. We're getting a request to open deployments, a new one in India, for instance. There's one in Brazil that we'll be opening this year. We're looking at another one in Asia. As well in Europe, there's another 1 or 2 that we'll be opening. So the reason we're opening these is we're seeing the opportunity. So I do expect international, over time, will become a bigger portion of our revenue. It's just that our growth within the U.S. continues to be phenomenal, especially in our enterprise segment.

Ari Nareg Terjanian Cleveland Research Company – Research Analyst

Right, right. And then just one follow-up, if I may. Can you remind us -- could you just fill out what were the impact of platform enhancements, both gross and net, to FY '22 product revenues?

Michael P. Scarpelli Snowflake Inc. – CFO

Well, I just said about $2 million was Q4 for one of the enhancements we rolled out in January for about 3 weeks. That wasn't even to all of our customers. It's now rolled out fully. The other one we talked about at our Investor Day was the storage compression, which we did see a reduction in storage, bringing that down to about 10 but it ends up -- compute becomes a higher percent, and that helps our margins.

Operator

Ladies and gentlemen, there are no further questions. Thank you for your participation. This concludes today's conference call. You may now disconnect.