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ADI.OQ - Q4 2021 Analog Devices Inc Earnings Call

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OVERVIEW:

Co. reported FY21 revenue of $7.32b and adjusted EPS of $6.46. 4Q21 revenue was $2.34b and adjusted EPS was $1.73. Expects 1Q22 revenue to be $2.6b, plus or minus $100m, and 1Q22 adjusted EPS to be $1.78, plus or minus $0.10.

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PRESENTATION

Operator

Good morning, and welcome to the Analog Devices' Fourth Quarter and Fiscal Year 2021 Earnings Conference Call, which is being audio webcast via telephone and over the web. I'd like to now introduce your host for today's call, Mr. Michael Lucarelli, Vice President of Investor Relations. Sir, the floor is yours.

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

Thank you, Stephanie, and good morning, everybody. Thanks for joining our fourth quarter and fiscal 2021 earnings conference call. With me on the call today are ADI's CEO, Vincent Roche; and ADI's CFO, Prashanth Mahendra-Rajah. For anyone who missed the release, you can find it and relating financial schedules at investor.analog.com.

Now on to the disclosures. The information we are about to discuss include forward-looking statements, which are subject to certain risks and uncertainties, as further described in our earnings release. ADI's and Maxim's current reports and other materials filed with the SEC. Actual could differ materially from the forward-looking information as these statements reflect our expectations only as of the date of this call. We undertake no obligation to update these statements, except as required by law.

Our comments today will also include non-GAAP financial measures, which exclude special items. When comparing our results to our historical performance, special items are also excluded from prior periods. Reconciliations of these non-GAAP measures to the most directly comparable GAAP measures and additional information about our non-GAAP measures are included in today's earnings release.

Please note, we published a table on our Investor web page of historical pro forma combined end market revenue aligned to ADI fiscal quarters. As part of this exercise, we also mapped subsegments to match ADI's groupings. As a result of this reclassification, about $150 million of annual revenue moved from Industrial and Communications to Consumer for the Maxim business. And with that, I'll turn it over to ADI's CEO, Vincent. Roche. Vince?

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Thank you very much, Mike, and a very good morning to you all. Well, once again, we delivered record revenue and profits in our fourth quarter, closing out what was a milestone year for ADI. Our success was driven by our industry-leading high-performance portfolio and our team's strong operational execution, enabling us to better meet the insatiable demand for our products.

Now stepping back a little. 2021 truly demonstrated the vital importance of semiconductors to the modern digital age. We invested ahead of this inflection, building a comprehensive portfolio to better solve our customers' most complex problems in this ubiquitously sensed and connected world. As we enter 2022, our backlog and bookings remain robust. And we continue to invest in manufacturing capacity, positioning us well for another successful year ahead.

Now moving on to our results. Our fourth quarter revenue was $2.34 billion and EPS was $1.73, both exceeding the midpoint of guidance. And for 2021, our revenue was $7.32 billion, and EPS was $6.46.

Looking at our organic ADI. We delivered new high watermarks on revenue and profits. Industrial and Automotive achieved record revenue this year, while Consumer returns to annual growth for the first time since 2017, and Communications revenue declined as continued strength in wired was offset by weakness in wireless related to the China market.

In 2021, we generated a record $2.4 billion of free cash flow, equating to a free cash flow margin of approximately 33%. This maintains our position in the top 10% of the S&P 500. In line with our revised capital allocation strategy to return 100% of free cash flow, we returned $3.7 billion to shareholders in 2021 through dividends and share buybacks.

It was not only a record year for performance and shareholder returns, but also for investments that position us to better capture market opportunities presented by secular growth drivers in our business. First, we took decisive action to add capacity throughout the year with more than $340 million in capital expenditures.

This is enabling us to better navigate the near-term supply/demand imbalance while achieving our long-term growth objectives. And in 2022, we're planning to expand our internal manufacturing capacity at our factories in the U.S. and Europe. These additional investments will create more profitable, flexible and resilient manufacturing capabilities at ADI.

Now at our core, we're an innovation-driven enterprise. And together with Maxim, we will invest more than $1.6 billion in R&D annually to ensure we continue developing solutions that define the edge of possible. As you know, to complement our organic efforts, we selectively use M&A to expand both our scale and our scope. In 2017, the acquisition of LTC reflected this strategy. Since acquiring the franchise, we delivered on our goal to double its historical growth rate. Equally impressive was our ability to improve on Linear's industry-leading gross margins.

More recently, we completed the acquisition of Maxim Integrated. Similar to previous acquisitions, we're combining the best from ADI and Maxim to develop a new operating system that enhances customer engagement and drives long-term profitable growth. And I'm very pleased with the progress that we've made already.

On the customer engagement side, the integration of our field teams has brought a tremendous degree of excitement. The team is already beginning to identify cross-selling opportunities and building out our opportunity pipeline. From an engineering and operations perspective, our teams are coming together at a remarkable speed, and we're aligning product and technology road maps to help accelerate growth in the years ahead.

This combination also strengthens the diversity of our portfolio and enriches our resilient business model. To that end, we now have approximately 75,000 product SKUs, and 80% of these products individually account for less than 0.1% of our total revenue. And the addition of Maxim provides us with a more comprehensive power portfolio. Maxim's primarily application-focused power offerings are highly complementary with ADI's more general purpose or catalog power portfolio.

This adds new SAM in all our markets and enhances cross-selling opportunities, accelerating revenue growth in our $2 billion-plus power portfolio. Given these investments, we entered 2022 with an unparalleled portfolio of technology and talent aimed at capitalizing on the secular growth trends across all our markets.

And now I'd like to share a few examples of how our business is at the heart of these emerging trends, starting with industrial. 2021 was a better year for our highly diversified and profitable industrial business with all applications achieving all-time highs. Our unrivaled high-performance portfolio continues to benefit from the mass digitalization movement across industries. Our largest industrial segment, instrumentation and test, is comprised of automated test equipment, electronic test and measurement and scientific instruments.

These applications must combat increasing test times as system complexity and metrology requirements rise exponentially. For example, processors and memory and data centers are leveraging finer node geometries with higher levels of integration, which can double the test time. This challenge is our opportunity.

Our innovative, purpose-built solutions are bringing test time back to parity while increasing our content by more than 50%. Factory automation is one of our largest industrial segments. I believe we're at a tipping point in the Industry 4.0 as customers are looking to add sensing, edge processing and connectivity to make their supply chains more robust, efficient and, of course, flexible.

ADI's precision signal chain and power franchises, sensing technologies and robust wired and wireless connectivity are critical to enabling these efforts. Looking ahead, we have an enormous opportunity to connect Maxim's rich power portfolio, which is underrepresented in the industrial sector today with ADI's strong position.

Shifting now to Automotive. In a year dominated by chip shortage headlines, we achieved record revenue as consumers and manufacturers are embracing electric vehicles and an enhanced in-vehicle experience. These 2 areas need additional semiconductor content and align very well with the strengths of both ADI and Maxim. In electric vehicles, our market-leading wired and wireless battery management systems of BMS offered customers the highest levels of accuracy, reliability and safety as well as flexibility to scale across all battery chemistries, including the more environmentally-friendly zero-Cobalt LFP.

Our BMS position is further strengthened with Maxim. We now sell to 7 of the top 10 EV manufacturers and our increased technology and product scale enables us to address new SAM. Our efficiency is also critical in electric vehicles to better optimize performance and range. Here, Maxim's strong and growing power management capabilities complement our portfolio.

Now inside the vehicle, automakers are enhancing the in-cabin experience. ADI's market-leading audio systems with signal processing, A2B connectivity and active road noise cancellation continues to gain traction. In 2021, our A2B franchise was designed in at 5 major OEMs. And since its launch in 2016, we've shipped over 50 million A2B nodes, and we expect this to double within the next 3 years.

With Maxim, our in-cabin connectivity offerings expand to include their industry-leading GMSL franchise, which is critical in architecting advanced driver-assistance systems.

Turning to Communications. 2021 was an uneven year as strength in wired was offset by weakness in the China wireless market. Encouragingly, as we look to 2022, the proliferation of 5G is gaining momentum globally, especially in North America.

In the wireless market, ADI is the leader with more than double the market share of our closest competitor. This year, we introduced the industry's first software-defined radio transceiver that includes a fully integrated digital front end. This next-generation transceiver platform enables us to defend and extend our position in traditional 5G and emerging O-RAN networks. Additionally, Maxim's power portfolio will support our goal to increase our power attach rate in the wireless market.

In our wired business, we grew again this year as data centers and networking became increasingly vital to accelerating digitalization. Maxim more than doubles our exposure to data centers and adds new growth vectors with its power management solutions for cloud processors and accelerators, and momentum is building with a strong pipeline across traditional customers as well as hyperscalers.

Finally, moving on to Consumer. Our business delivered double-digit growth this year as we executed on our strategy to diversify our customers' products and applications. Maxim further builds in these efforts, bringing additional power, audio and sensing capabilities and adding new applications like fast-charging and gaming. Given the strong pipeline and design wins for our signal processing solutions across hearables, wearables and professional audio/video, combined with our power management capabilities, I'm confident that we're on the path for continued growth.

Now I'd like to focus on ESG just a little, which is now an integral part of our business strategy. Broadly speaking, I believe semiconductors can play a major role in improving our standard of living while also protecting our planetary health. For example, ADI's technology is critical to optimizing global energy efficiency from EVs and charging stations; two, sustainable energy and smart grids. We're not only investing in these applications, but they represent a meaningful and growing portion of ADI's revenue today. So we've made substantial progress on our ESG initiatives in 2021, including a commitment to increase the use of sustainable energy for 100% of our organic ADI manufacturing activities by 2025, up from 50% today.

Actions like these will help us achieve our goal of carbon neutrality by 2030 and net-zero emissions by 2050. We launched the Ocean and Climate Innovation Accelerator Consortium focused on the critical role of oceans in combating climate change. And we've enhanced our disclosure and transparency in ESG topics, especially around diversity, equity and inclusion. In the year ahead, we look to extend our ESG initiatives across the combined company and, of course, make further progress toward our goals.

So in closing, I'd like to thank our employees and partners who worked tirelessly throughout this past year, helping ADI achieve these historic results. We're off to a strong start in 2022 with continued robust demand and line of sight to capacity additions. And I've never been more optimistic about ADI's future. Our industry-leading position is stronger with Maxim as we expand our capabilities to capitalize on emerging secular drivers positioning us for faster growth in the years ahead.

And with that, I'll hand you over to Prashanth.

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Thank you, Vince. Let me add my welcome to our year-end earnings call. Except for revenue, my comments on the P&L and our outlook will be on a non-GAAP or adjusted basis, which excludes special items outlined in today's press release.

Also, the acquisition of Maxim closed on August 26. As such, I will discuss results inclusive of Maxim's contributions for approximately 9.5 weeks. I'll begin with a brief review of 2021. We delivered sequential revenue growth every quarter, leading to a new all-time high of $7.32 billion. Gross margins of 70.9% increased 180 basis points due to favorable product mix, stronger utilization and the savings from our legacy LTC plant optimization.

Operating margins of 42.4% increased 250 basis points, reflecting gross margin fall-through and disciplined discretionary spending. All told, adjusted EPS increased more than 30% to a record $6.46. Turning to the fourth quarter. Revenue of $2.34 billion exceeded the midpoint of our updated guidance. Maxim's contribution to revenue was $559 million.

Looking at the end market results and to give a better view into the underlying trends, I'll focus my remarks on organic ADI results. But this will be the last earnings call where we provide ADI organic commentary. Industrial represented 57% of revenue and increased slightly sequentially and 25% year-over-year with growth across every subsegment. For the full year, industrial increased 28%. This strong performance, once again, is a testament to our sustained relative outperformance in the industrial market.

Communications represented 16% of revenue and was flat sequentially, while decreasing year-over-year. For the year, we delivered record wired sales, while total comps declined due to the weakness in China wireless, largely related to geopolitical tensions. Excluding this region, total comps grew more than 20% in 2021. And overall, our comms geographic mix shifted with North America, Europe and Korea, now representing our largest sources of revenue.

Automotive represented 15% of revenue and was down 9% sequentially as the third quarter included revenue from an IP licensing agreement. Excluding this, auto was flat sequentially. On a year-over-year basis, auto increased 15% with BMS more than doubling, reflecting our leadership position in the electrification ecosystem. For the year, auto exhibited robust broad-based growth, finishing up 36%. Consumer represented 12% of revenue and increased more than 20% sequentially and year-over-year, marking the fourth consecutive quarter of annual growth. Over a year ago, we said Consumer would grow in 2021 and the team delivered on this commitment, with consumer increasing 12% for the year.

Moving on to the rest of the fourth quarter P&L. I'm going to speak to the results inclusive of the partial quarter of Maxim. Gross margins were 70.9%, up 90 bps year-over-year. Operating margins finished at 43.1%, up 140 basis points year-over-year. Nonop expense was $44 million and the tax rate was 12.7%.

All in, adjusted EPS was $1.73 above the midpoint of guide and up more than 20% year-over-year. If we look at the balance sheet, we ended the quarter with approximately $2 billion of cash and equivalents and on a trailing 12-month pro forma basis, our net leverage ratio was 1.1 turns. Building on our ESG efforts, we continue to strategically leverage sustainable financing. We're proud to be the first U.S. tech company to deploy 3 sustainable finance instruments with our inaugural green bond issuance, a sustainability-linked revolving credit facility and a sustainability linked to bond offering.

Specifically, this bond offering was part of our $4 billion refinancing efforts during the quarter. And as a result, we lowered our weighted average coupon to 2.7% while extending the average duration of our total debt by nearly 10 years.

Inventory dollars increased slightly sequentially after adjusting for the partial quarter of Maxim activity and the fair value step-up of inventory related to the acquisition, while inventory days were down slightly. Channel inventory declined and remains below the low end of our 7- to 8-week target.

Moving to the cash flow statement. For the year, cash flow from operations increased 36% to more than $2.7 billion. We generated a record free cash flow of $2.4 billion or approximately 33% of revenue despite CapEx more than doubling to $344 million or 4.7% of revenue. We also returned a record $3.7 billion or more than 150% of free cash flow to shareholders this year by dividends and buybacks, including 80% of our $2.5 billion ASR program.

As a reminder, we plan to return 100% of free cash flow to shareholders. This is accomplished by growing our dividend annually with a 40% to 60% dividend payout target and by using residual cash flow for buybacks. We entered 2022 as a much larger enterprise with an attractive long-term outlook. As Vince mentioned, we plan to increase our capacity investments to support revenue growth and reinforce the resiliency and efficiency of our hybrid manufacturing model.

As such, we anticipate CapEx being 6% to 8% of revenue for 2022 above our long-term model of 4%. This step-up in CapEx will not impact the commitment we made in September to buy back 5 billion of shares by the end of calendar '22.

So now on to the first quarter outlook. Revenue is expected to be $2.6 billion, plus or minus $100 million. Based on the midpoint, we expect operating margin to be 43.3%, plus or minus 70 bps. We expect nonop expenses of approximately $50 million, a 12.5% tax rate and a share count of approximately 530 million. Based on these inputs, adjusted EPS is expected to be $1.78 plus or minus $0.10.

For additional context, using the fourth quarter pro forma combined revenue as a base, our guide at the midpoint implies low single-digit growth quarter-on-quarter in Q1 for what is normally a seasonally weaker quarter. This growth is driven by an increase in B2B quarter-over-quarter, while Consumer is down sequentially.

So before closing, I want to give a brief update on our Maxim integration progress. Phase 1 of shareholder value creation is well underway, building conviction in our cost synergy timeline. We anticipate realizing over 40% of the initial $275 million OpEx and COGS synergy target in fiscal '22 with the remaining coming in fiscal '23.

I'm proud of the team's effort and confident this pace of execution will continue. At our Analyst Day next spring, we'll update investors on our progress as well as provide more details on Phases 2 and 3, which relate to additional savings from infrastructure optimization and revenue synergies, respectively.

Before turning to Q&A, I'd like to congratulate Michael Lucarelli on his promotion to Vice President of Investor Relations and Financial Planning and Analysis. Look forward to working with you, Mike, in this continued partnership. Let me hand it over to you to take Q&A.

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

Thanks, Prashanth. All right. With that, let's get to our Q&A session. (Operator Instructions) With that, we have our first question, please.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Your first question comes from the line of John Pitzer with Credit Suisse.

John William Pitzer - *Crédit Suisse AG, Research Division - MD, Global Technology Strategist and Global Technology Sector Head*

Congratulations on the solid quarter. Vince, Prashanth, if I exclude kind of the Maxim revenue in the October quarter, the core ADI business just came in line with the midpoint of the original range, which is clearly not horrible, but just given strength of business and kind of your penchant to tend to give upside and the view that maybe Maxim was more supply-constrained than ADI, I'm just wondering if you can help us understand that dynamic and maybe it's getting rectified in the January quarter being guided above seasonal, but were there supply constraints in the quarter that impacted either revenue and/or margins? Any kind of conversation around that would be helpful.

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Yes. Thank you for the question, John. And it's a pretty straightforward answer. In the past quarter, our organic supply had some impact from some COVID shutdowns in Southeast Asia that affected much of the industry. We still did grow sequentially in the fourth quarter. But as we've been talking about for the last couple of quarters, our supply has been limited and revenue really is a function of supply. So that hiccup did put a little bit of pressure on the revenue line. And you'll see that correct itself as we go forward.

Operator

Your next question comes from Toshiya Hari with Goldman Sachs.

Toshiya Hari - *Goldman Sachs Group, Inc., Research Division - MD*

Mike, congrats on the promotion. I guess I had a question on pricing and also long-term supply agreements. Quite a few of your competitors or peers in the industry have talked about approaching customers or customers approaching them about long-term agreements. I think you gave a couple of comments on past calls, but if you can update us on how you're thinking about initiatives of that sort, that would be super helpful. And how you're balancing that with your long-term purchases of wafer capacity? Any comments on how to think about pricing broadly going forward would be super helpful.

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Yes. Thanks, Toshi. Why don't I take pricing, and I'll let Vince kind of speak how we think about it longer term. So in the -- the short answer is, for 2021, we've been talking about rising cost inflation over the course of the year, and we've been raising our prices with the goal of neutralizing the impact to margin. I would say that in the fiscal year that just finished, cost increases and price increases were not completely synchronized.

So it's very likely that cost inflation outpaced our pricing actions for the year, and we're likely a modest headwind to the year. As we go into 2022, we're looking for the inverse of that. We're looking for pricing net of inflation to be a modest tailwind to the year as the price increases that have begun begin to get more traction. And we believe that while we still will have some cost increases over the course of the year, most of those are now baked into the run rate.

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Toshi, I can take a slightly longer-term view of things. I think it's true to say, certainly from our standpoint, that price increases aren't new. We've been systematically raising prices as a company for many, many years. I think we've talked about before. We continue to deliver increasing value in our new product streams. And we also maintain products for our customers that are often more than 20 years in -- 20 years old in vintage terms.

We've taken a very measured approach to pricing over the last year. And we've been very transparent with our customers as well that price increases are really more about passing on costs rather than looking to enhancing our margins.

Last comment on pricing. I think the industry, as we approach this kind of post-Moore's Law era, we're in an era now, I believe, of structural price increases rather than cyclical.

In other words, I think you'll start to see inflation sustained for the industry in the years ahead. It's been proven over the last couple of years for certain that semis are the roots of the modern digital economy. And I think customers understand as well that importance and the value that is increasingly created by semi. So I believe that, as I said, inflation will persist. It will moderate, but I think it's a facet now of the business structure of the semi industry and indeed ADI's business.

Operator

Your next question is from Tore Svanberg with Stifel.

Tore Egil Svanberg - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD*

And congratulations on the record results. Vince, you're probably not going to share revenue synergy numbers with us probably until the Analyst Day, but could you perhaps just give us some examples of potential revenue synergies between Maxim and ADI, please?

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Yes. Thanks, Tore. Yes, I think -- I mean, there are many, many -- I think I mentioned in the prepared remarks, for example, that Maxim is very underrepresented in the industrial space, where ADI is very, very strong. Half our business -- total business is industrial, and it's a very, very small part of Maxim's business.

And where I see the opportunity there is really on the power side of things, power management, in particular. It's the fastest-growing segment in the analog space. And I think generally, across the board, we're still underrepresented as a company in power. We will -- we today have approximately $2.3 billion, $2.4 billion of combined power revenues.

My sense is we can double that in a reasonable period of time. And we'll give a lot more detail on that when we get to the Investor Day over the next couple of months. And from an application and market standpoint, I'd just like to point to data center. You know the power management solutions that Maxim has for companionship with cloud processors, AI machines, accelerators and so on. I think we'll combine very nicely with ADI's data center micromodules.

And then in Automotive, connectivity, Maxim's GMSL high-speed link technology used in our in-cabin connectivity portfolio will enable us to optimize solutions and address a lot more applications in the car. And that's a nice companion as well to ADI's A2B connectivity solution for audio.

And last but not least, Maxim has added a lot of heft to our BMS portfolio. And our portfolio now is double the size it was pre-Maxim. So -- and as I mentioned in -- again, in the prepared remarks, we now sell 7 out of the top 10 OEMs in the electric car area. So -- and there's a lot more examples, but they are the primary ones I'd like to point out at this stage.

Operator

Your next question is from Vivek Arya with Bank of America Securities.

Vivek Arya - *BofA Securities, Research Division - Director*

Vince, I just wanted to get your perspective on the shape of kind of fiscal '22 sales growth. Your Q1 outlook implies, I believe, about 19% pro forma sales growth, that's well above your closest analog [peers] with an acceleration from Q4. And if I were to assume that Q1 is kind of the low point of the year and you grow supply sequentially, that points to a double-digit sales growth.

So I know you're not giving full year guidance, but are we thinking about it the right way? And what could be the puts and takes from a supply and then also a mix perspective as we go through the year?

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Yes. Thanks, Vivek. So I'm going to at least give you some shape on that. So when we look across -- when we look into 2022, we can see growth across all the various market sectors for the year. And I think it's possible that we'll see another double-digit top line year for ADI. And the primary reasons, well, we've got a very strong backlog as we enter the year. We're seeing broad-based demand continue. I think also, we're seeing some improvement, generally speaking. With each passing month, we're seeing improvements in supply. So I think that line of sight gives us increased confidence. That's both internally as well as externally.

We are in catch up more than pricing. So I think you'll see some significant contribution in 2022 from pricing activities. And also, inventories continue to remain low in the distribution channel and, of course, on the customer side pretty much on a broad basis. So I think overall, '22 should shape up to be a good year. And we've got many, many drivers there on our side.

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Vivek, maybe just double-clicking on the supply item to provide clarity. We have -- we put in a fair amount of equipment orders for the legacy ADI operations. So we expect ADI capacity to continue to increase quarter-on-quarter over the coming fiscal year. On the Maxim side, we've done the same, but that -- those orders only went in when the deal closed. So given the long lead times from the semi-cap guys, we're probably unlikely to see a meaningful increase in Maxim's ability to supply until the tail end of the year. So unfortunately, I think Maxim from a fiscal year basis will probably be a little bit of a drag on growth just because we can't get the tools fast enough.

Operator

Your next question is from Ambrish Srivastava with BMO.

Ambrish Srivastava - *BMO Capital Markets Equity Research - MD of Semiconductor Research & Senior Research Analyst*

I just wanted to say thanks to Mike for providing all the web schedule that really goes a long way in transparency. So I really appreciate that.

My question is on lead times and the expedites. I just wanted to see what you're seeing versus what TI highlighted, which was very different than what we've heard from other companies. So specifically, are you seeing expedites narrow down? And then where are your lead times? So I think in the last earnings call, you had mentioned -- or in my call back, you had mentioned that you had 25% hotspots. So color on those would be helpful.

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Sure. Ambrish, we're really not seeing much of a change. The customer -- on customer buying behavior, book-to-bill is well above [1] in the fourth quarter. So our outlook to grow quarter-on-quarter for the first quarter in what is normally a seasonally weaker quarter as a reference to that. Our backlog increased, and we're starting 2022 with a very high level, and we have not seen much change in cancellations or pushouts.

So we're continuing to do what we have been doing, and that is we're reviewing with sales and ops for red flags that would indicate there's some level of turning in the market. We haven't seen anything notable. Really, it's pretty strong across all end markets and all geographies. And as we've said before, we manage our business on sell-through. So we really look through distribution to get insight from where our products are going on a sell-through basis to understand what's happening in terms of who's buying and where it's being shipped to. So we're prepared for things to change. But I would say right now, it continues to feel as it did a quarter ago.

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Yes. I think I'm brief from my perspective. The number of conversations that I've been having with customers certainly hasn't slowed down. And in these conversations, it's pretty clear to me that what we're being requested to support as real demand. So our customers are trying to get products out the door, and they're not building inventories at this point in time.

Ambrish Srivastava - *BMO Capital Markets Equity Research - MD of Semiconductor Research & Senior Research Analyst*

Got it. And have the lead times changed versus where they were last quarter?

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

It's -- it depends on the product, and it depends on the market. So we have some areas where they continue to extend and others that have stabilized. So overall, lead times are above normal, and it's not where we want them to be. But it's very product and market-specific given the diversity of what we make and where we make it.

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

I think it's true to say lead times have stabilized.

Operator

Your next question comes from Stacy Rasgon with Bernstein Research.

Stacy Aaron Rasgon - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

I wanted to ask a little more about the shape of the synergies. I think you had said the cost synergies would be in 40% this year and the remainder of next year. Can you give us some idea how do those split out between OpEx and gross margin in COGS? And what is the proper sort of all-in baseline for OpEx that we should be building those synergies off of?

And I guess, finally, with gross margins along with same lines, given you've got pricing and other stuff as a tailwind and you see revenue growth, do you still think that Q1 gross margins wherever they want coming out, is that the trough for the year, given how everything else flows through?

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Yes. So Stacy, the way to think about the cost synergies is, we said roughly 40% in the coming fiscal and then the balance in 2023. The majority of the coming fiscal will actually be in cost of goods. And then in 2023, you'll see that flip to be the majority of that coming in OpEx. What else can I tell you there. The -- anything else, Mike, that's relevant. The...

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

I'll call it -- that would be -- that's Phase 1. We will talk more about Phase 2 at the Analyst Day, and we'll look to increase that synergy target at that time. And then on the second question on gross margin, I'll pass it back to Prashanth.

Stacy Aaron Rasgon - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

What is the proper sort of current like folding run rate for OpEx right now?

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

You look at our first quarter guide, and that's probably a good level of run rate OpEx, I would say. We -- in that guide, there is about $20 million of annual OpEx we took out in our fourth quarter. So maybe add $20 million to that for the run rate.

Stacy Aaron Rasgon - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

I'm sorry (inaudible)

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Yes. On gross margins, the -- so first quarter seasonally tends to be a little bit lower because we have the holiday shutdowns and this first quarter here will have a full quarter of Maxim, which, as many of you know, had lower gross margins than stand-alone ADI. So we've got some headwind coming from that.

The tailwind is we've got the revenue that's coming in strong and pricing, as I mentioned earlier, is going to be -- start to be mildly accretive. So all in, I would think gross margins kind of sequentially I think flattish is a safe model.

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

And then you're right, on the gross margin for the year, the plan is for it to continue to rise throughout the year, assuming demand remains strong and mix doesn't change given synergies and also our pricing actions.

Operator

Your next question is from Harlan Sur with JPMorgan.

Harlan Sur - *JPMorgan Chase & Co, Research Division - Senior Analyst*

Congratulations on the strong results and execution. On testing inventories, I think you mentioned that they continue to be below your target range of 7 to 8 weeks. And I know that on a finished goods perspective, at least through Q3, that was down year-over-year, it was down year-to-date versus an increase in total inventories, which implies to me that consignment or direct customer inventories are also quite lean and demand is strong. And so I guess what's your view on when the team and your customers will be in a position to build back inventories? Or is it just hand them out for the next several quarters?

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Yes. I think it probably looks to be continued hand to mouth for the next couple of quarters. Our inventory numbers are a little bit confusing because of some of the math that's in there. So I'll just go back to what I said in the prepared remarks. Days of inventory was down slightly. The internal inventory balance was up as we built raw materials and WIP.

You have some noise in there from Maxim's inventory being added ours in middle of the quarter as well as the purchase accounting math, which requires us to do a step up of that. So adjusting for all of that, we were up slightly in terms of ADI balance sheet inventory, and most of that was in WIP.

On the channel side, it remains very lean and well below where we want it to be, and that causes some challenges on customer service as it does for everyone in the industry. We don't see that abating at least for the first or second quarter, and we -- it's hard for us to see further out than that.

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

Stephanie, could we have our last question please?

Operator

Your last question is from C.J. Muse with Evercore.

Christopher James Muse - *Evercore ISI Institutional Equities, Research Division - Senior MD, Head of Global Semiconductor Research & Senior Equity Research Analyst*

I guess a question on supply and gross margins. As you look at fiscal '22, can you speak to the growth you anticipate from internal versus external supply? And then based on that, how should we think about the implications to your gross margins?

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Internal versus external supply. Yes. So C.J., the well, let's break down the dynamics. On the internal supply, I mentioned that ADI's internal capacity will continue to improve as we go through every quarter as we bring more equipment online. On the Maxim side, I mentioned that is pretty much flat for most of the year. We're optimistic that we might be able to see some improvement towards the tail end of the year as we get more equipment in.

On the external side, I will say that Vince himself is personally involved in conversations with our foundry partners and looking to get additional wafer capacity when we can. But it's very much driven by what nodes are available. And maybe I'll pass to Vince here to add a bit more comments since he's been having a lot of those conversations.

Vincent T. Roche - *Analog Devices, Inc. - President, CEO & Director*

Yes. I think the best answer we can give you, C.J., is that we've indicated we expect gross margins to increase throughout the year. And we've got a hybrid model. So we expect to -- against that, we're not expecting any kind of external, internal perturbations that will impact gross margin, but we expect it to increase throughout the year.

Michael C. Lucarelli - *Analog Devices, Inc. - Senior Director of IR*

Thanks, everyone, for joining the call this morning. A copy of the transcript will be available on our website and all available reconciliations and additional information can also be found there. Thanks again for joining us and your continued interest in Analog Devices. Have a great Thanksgiving.

Prashanth Mahendra-Rajah - *Analog Devices, Inc. - Senior VP of Finance & CFO*

Happy Thanksgiving, everyone.

Operator

This concludes today's Analog Devices' conference call. You may now disconnect. Speakers, please hold the line.
