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PRESENTATION

Operator

Good morning, and welcome to the Analog Devices Fourth Quarter and Fiscal Year 2022 Earnings Conference Call, which is being audio webcast via telephone and over the web. As a reminder, this event is being recorded.

I'd now like to introduce your host for today's call. Mr. Michael Lucarelli, Vice President of Investor Relations and FP&A. Sir, the floor is yours.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

Thank you, Betsy, and good morning, everybody. Thanks for joining our fourth quarter and fiscal 2022 conference call. With me on the call today are ADI's CEO and Chair of 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 disclosures. Information we're about to discuss includes forward-looking statements, which are subject to certain risks and uncertainties, as further described in our earnings release and our periodic reports and other materials filed with the SEC. Actual results 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. Reconciliation of these non-GAAP measures to their most directly comparable GAAP measures and additional information about our non-GAAP measures are included in today's earnings release.

And with that, I'll turn it over to ADI's CEO and Chair, Vince. Vince?

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Thank you, Mike, and good morning to you, all. Well, I'm really extremely pleased to share that we delivered another record quarter, capping off what was a banner year for ADI. Our fourth quarter revenue was $3.25 billion and adjusted EPS was $2.73, and both at the high end of our outlook.

For the fiscal year, revenue was $12 billion, up an impressive 26% year-over-year on a combined basis. Our Industrial, Automotive and Communications markets delivered all-time high revenues, and our consumer business continued to grow despite industry-wide weakness. Adjusted EPS increased by nearly 50% to $9.57.

We also delivered on our commitment to return 100% of free cash flow to shareholders in '22, returning $4.6 billion through share repurchases and dividends. These results not only exemplify the strength of our portfolio but also our deep customer focus and the hard work of our employees to fortify ADI's brand. To that end, in my recent conversations with customers, the message has been very clear.

While we're not immune to supply disruptions, ADI's service, quality and support throughout this challenging time continues to be outstanding. Importantly, this sentiment is shared by customers of all sizes and across all markets. As a result, our customers are calling upon ADI to engage in longer term, more strategic collaborations to develop solutions that further empower the intelligent edge.

So to ensure we remain at the forefront of technological advancements and customer service, we invested $1.7 billion in R&D and $700 million in CapEx in FY'22. Now let me start with R&D. Our investments are targeted at strengthening our foundational high-performance analog franchises as well as moving up the stack to create more complete solutions for our customers. A prime example is our Apollo platform, which we previewed at our Investor Day in April.

Apollo is a flexible high-speed signal processing platform with unmatched levels of functionality, integration and performance, making it ubiquitous for all customers, but especially appealing to those in the broad market. During the quarter, we began sampling this innovative platform with our aerospace, communications and instrumentation customers, and their feedback has been extremely positive.

Turning now to the operations side. Over the last year, we invested a record amount of CapEx to increase our manufacturing output. And in 2023, we are, once again, investing aggressively in our U.S. and European factories to significantly expand our capacity. These investments will create a more flexible and cost-effective hybrid manufacturing model by increasing our swing capacity to around 70% of revenue in the coming years.

Our R&D and supply chain investments are essential to support our design win pipeline, which expanded by more than 10% in '22. This growth was led by our automotive energy systems and digital health care businesses. Notably, our growth in automotive was underpinned by battery management systems, or BMS, which now has an opportunity pipeline nearing $4 billion. This year, 8 new manufacturers designed in our BMS solutions, including two that plan to utilize our wireless platform. Our strong leadership position, combined with increasing EV penetration globally gives me great confidence in our future growth prospects.

Looking now at some selected design activity in the quarter. In Industrial Automation, we were designed into an advanced diagnostic system that measures machine health at a global supplier for energy exploration. Our system solution approach enables an approximate 50% reduction in size and lowers wiring costs meaningfully. In aerospace and defense, we won RF module programs at multiple defense prime contractors. Our modules integrate hundreds of components to simplify the design process for our customers while increasing our content from hundreds to thousands of dollars per system.

In Industrial Instrumentation, we secured wins at two market leaders of next-generation high-voltage testers for electric vehicles and renewable energy systems. The combination of our high-voltage processes and precision technology enables us to deliver accurate, reliable and efficient testing required to scale the manufacturing of these systems.

And lastly, in communications, we expanded our leadership in 5G radio systems with our transceiver portfolio, winning additional share at key suppliers. These new wins position us even better as 5G networks roll out globally, especially in India, and O-RAN begins to proliferate. Importantly, our design pipeline is beginning to benefit from cross-selling our ADI and Maxim portfolios. This puts us on a path to achieve our target $1 billion in revenue synergies.

For example, at an European auto manufacturer, we built upon our strong audio connectivity position to cross-sell our high-speed GMSL technology, connecting their advanced driver systems. We're also capturing new opportunities with GMSL in the industrial market. Last quarter, for example, our technology was designed into autonomous order fulfillment systems at one of the largest e-commerce companies. We're also making great inroads with our broader power portfolio, where our opportunity pipeline increased by double digits last year.

Our increased breadth is helping us to better match customers' performance and power trade-offs across more applications, expanding our power SAM to nearly $10 billion. For example, at a leading European industrial customer, our position in mid-voltage power for distributed I/O control systems enabled us to pull through additional power content and precision signal chain sockets, thereby, doubling our content per system.

Our expanding pipeline and significant revenue synergy opportunities instills greater diversity and resilience into our business while adding new growth vectors. And taken together, I'm confident in our ability to bend the growth curve and move from our historical mid-single-digit growth rate to our long-term model of 7% to 10%.

So in summary, while the macro crosscurrents are creating an abundance of uncertainty, ADI has successfully navigated many slowdowns over the course of our 57-year history. The strength of our franchise allows us to invest through business cycles, ensuring we continue to deliver breakthrough innovation, deepen our relevance to our customers and capture the emerging secular opportunities at the intelligent edge.

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

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

Thank you, Vince. Let me add my welcome to our fourth quarter earnings call. My comments today, with the exception of revenue, will be on an adjusted basis, which excludes special items outlined in today's press release. We closed fiscal 2022 as our second consecutive year of record revenue and profits. We delivered sequential growth each quarter, achieving a new all-time high of $12 billion in revenue, gross margins of 73.6% increased 270 basis points due to favorable product mix, stronger utilization and cost synergies. Operating margin of 49.4% increased 700 basis points, reflecting strong execution on OpEx synergies, and adjusted EPS increased nearly 50% to $9.57.

For the fourth quarter, revenue was $3.25 billion, finishing at the high end of our outlook. As I cover the performance by end market, both for the quarter and full year, my growth comments are on an adjusted combined basis where applicable. Industrial, our most diverse and profitable end market, hit another all-time high and represented 51% of quarterly revenue. Growth was broad-based with each major application increasing sequentially and year-over-year. For the year, Industrial expanded 29% with growth in each business. Notably, digital health care was up over 30% and has now achieved seven straight record years. This consistent success in health care underscores the breadth of our ICs and subsystem solutions in a key secular growth market where such performance is critical.

Automotive, which represented 21% of quarterly revenue, achieved another record year, growing both sequentially and year-over-year. For the year, auto was up 31%, a favorable mix of premium vehicles, our growing BMS, GMSL, A2B and functional safe power franchises, combined with enhanced value capture, drove significant growth compared to SAAR. Together, these franchises of BMS, GMSL, A2B and functional safe power represent over $1 billion of automotive revenue.

Communications, which represented 15% of quarterly revenue, achieved another record quarter with strong sequential growth in wireline, while our wireless business was about flat. For the year, comms grew 27%. In wireless, our strong position in radio signal chains is enabling the 5G rollout globally. And in wireline, our optical and power portfolios benefited from the continued demand for bandwidth.

Lastly, consumer represented 13% of quarterly revenue and was up modestly sequentially and flat year-over-year. Despite a challenging year for the broader industry, consumer finished up 8%. This growth is a testament to how we have diversified our consumer business and the innovation premium our products command. Today, approximately 30% of revenue is derived from long life cycle prosumer applications, including next-gen conferencing systems, professional AV and home theater, while the remaining revenue in consumer relates to the faster-growing wearables and hearables as well as premium smartphones.

Now I'll move down the P&L for the fourth quarter. Gross margin was 74%, up 310 basis points year-over-year, driven by favorable product mix and synergy capture. OpEx was $744 million, down slightly sequentially due to the realization of additional synergies. And operating margin increased 800 basis points year-over-year, finishing at a record 51.1% as we exited the year with roughly $350 million of synergies realized across OpEx and cost of goods in our run rate. This incredible pace of synergy capture would not have been possible without the dedication of our integration office and the cross-functional teams that supported them. Non-Op expenses were $57 million, and the tax rate was 12.2%. All told, adjusted EPS came in at $2.73, up 58% year-over-year.

Moving on to the balance sheet. We ended the quarter with approximately $1.5 billion of cash and equivalents and our net leverage ratio continues to remain below 1. Days of inventory increased to 140 while channel inventory was once again below our target range of 7 to 8 weeks. Let me provide some additional details on our inventory. But first, during these uncertain times, we believe it is prudent to temporarily hold more finished goods on our balance sheet instead of shipping into the channel. This provides us with enhanced flexibility to better align supply with end customer demand across regions and markets.

Second, raw material and WIP are increasing as we begin to rebuild our die bank. Over the last couple of years, our die bank was drastically reduced, and in some cases, fits 50% below optimal levels. Die bank inventory is highly cost efficient and it's critical for customer service as it can be used for different markets and customers. We believe higher inventory is crucial to reducing lead times as we look to return to our 4- to 8-week target service level over time. Given these actions, we expect inventory to increase in the near term before trending back down as we balance die bank rebuild with finished goods depletion.

Moving to cash flow items. CapEx was $305 million for the quarter and $699 million for the year or 6% of revenue. As we outlined at our Investor Day, we expect elevated CapEx through 2023 at around high single digits as a percentage of revenue. For fiscal 2022, we generated $3.8 billion of free cash flow or 31% of revenue. This is lower than normal given our higher capital intensity and onetime transaction and restructuring costs. These near-term headwinds were not unexpected when we outlined our long-term free cash flow target at our Investor Day, and we remain committed to growing free cash flow to 40% of revenue.

As a reminder, we target 100% free cash flow return. We aim to grow our dividend at a 10% CAGR through the cycle with the remaining cash used for share count reduction. And during the year, we returned more than 100% of free cash flow to shareholders. We repurchased $3.1 billion in shares, reducing share count by nearly 4%, while paying $1.5 billion of dividends.

So let me close with a brief update on the current operating backdrop. As we noted last quarter, the uncertain and slowing macroeconomic environment has had some impact on demand. However, after a couple of months of slowing orders, we saw bookings stabilize during the quarter at what we'd consider relatively normal levels for entering our first quarter. Not surprisingly, bookings remain the strongest in the industrial and auto, while communications and consumer are weaker. We're guiding first quarter revenue to $3.15 billion, plus or minus $100 million.

Given this environment, we thought it might be helpful to be a little more prescriptive in our outlook by market. So in the first quarter, we expect auto to be up slightly sequentially; industrial about flat; comps to decline by mid-single digits; and consumer to be down double digits sequentially. At the midpoint of our outlook, revenue will be up high teens year-over-year and our B2B markets increasing over 20%. Op margins are expected to be 50%, plus or minus 70 bps. Tax rate is expected to be between 12% to 14%. And based on these inputs, adjusted EPS should be $2.60, plus or minus $0.10.

So stepping back, we are well positioned in the near term, but the environment remains highly variable and dynamic. ADI, like the rest of the industry, is not immune to a softer macro environment, and thus, we remain cautious, yet optimistic. Longer term, we have over a year of backlog and continued momentum in our pipeline. We also have high flexibility with our hybrid manufacturing model and several OpEx levers in our toolkit to support our industry-leading margins and maintain robust cash returns to shareholders.

So let me now pass it back to Mike for the Q&A.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

Thanks, Prashanth. Now let's get to my favorite part of the call, a Q&A session.

(Operator Instructions) With that, will we have our first question, please?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions)

Our first question today comes from Tore Svanberg with Stifel.

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

Congratulations on another record quarter. Vince, a question for you. When you talked about the design wins, some of the design win activity, we continue to hear more and more of the system solutions. And I was just wondering if you could add a little bit more color on how your growth is being driven by higher ASPs. So I'm not suggesting higher pricing, right? I'm talking about higher ASPs because all of your products, obviously, are moving up the value chain to more of a system solution type perspective.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Firstly, if you look at our ASPs compared to the analog sector, we have a 3x multiple, and versus our closest competitor, we have a 5x multiple, and that diversion has been growing over the last several years. So we decided quite a while ago that across the markets and the applications that we really cared about that what was really important for us to do was boil down the increasing complexity that our customers are dealing with in their product development systems and activities.

And so essentially, what we've done is, we've taken that complexity into ADI. We get to the other side of that complexity with the quality of our innovations and our ability to be able to couple many, many different facets of our portfolio together in areas like power management. We're building these 3D-stacked module systems, sometimes with ASPs of hundreds of dollars.

If you look at our 5G radio systems, same thing, we combine microwave, we combine data conversion, power, digital algorithms and so on and so forth. So we have -- within the company, we believe in diversity of technologies, solutions customers and that choice of business model, Tore, at the end of the day and how we execute it gives us the richer ASPs when compared with our competitors.

Operator

The next question comes 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 I was hoping to probe a bit more around the cautious but optimistic view. You talked about orders stabilizing and a backlog that extends out 12 months. So I guess, first question, can you talk about what kind of scrubbing you've done on that backlog? And then secondly, based on that, how does that inform your outlook heading into fiscal '23?

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

Let me take that and help give some color on the demand order booking. So if you step back and think about last year, the first half of the year, we had orders at historical highs. And then last quarter in the earnings call, we called out that orders were beginning to slow and that's a decline actually continued into the fourth quarter. However, we saw orders start to stabilize about midway through the fourth quarter and into the first couple of weeks here of the first quarter. So those bookings are strongest in industrial and auto, not surprising, and weaker in comms and consumer, which I reflected in the guide. .

From a geo standpoint, we'd say that not surprising we're seeing weakness in Asia, especially China, but North America and Europe are holding up well. So given the combination of orders stabilizing and the backlog coverage that we have out, we feel pretty good about the near term. There is uncertainty out there and things could change fast, but that sort of what's driving our sort of cautious optimism.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. One other thing, C.J., to note, we've said before, the signal we watch most carefully in terms of really trying to understand demand is sell-through rather than sell-in. So that, I think, gives us a deeper degree of reality and the match between true demand and supply.

Operator

The next question comes from Vivek Arya with Bank of America.

Vivek Arya - *BofA Securities, Research Division - MD in Equity Research & Research Analyst*

I actually wanted to follow up on that question. Vince or Prashanth, are you surprised why your orders and bookings are holding up better, even though all the headlines we see from a macro perspective seem to be getting tougher. So what is helping you? And then specifically within your industrial business, is it fair to think that factory automation is perhaps the most macro exposed part? And if yes, how should we think about that specific part of your most macro exposed segment within the industrial business going into next year?

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. So well, let me start with the automation question. I've talked about a lot of the automation customers over the last while, and there continues to be, I would say, bullish expectation. I mean they are not immune from the macro. I think some of our customers are experiencing some soft cancellations in their business.

But if you look at what's happening, we're going to see life sciences transformed. We're in the early stages of small batch processing in life sciences for manufacturing, for example. The energy sector is another area where, particularly the American, the U.S.-based automation customers, a lot of their businesses are -- they have a very large portion in the energy sector, oil and gas, for example, and that is likely to remain strong. So if that's a bedrock -- I think that will remain strong for several years to come. We are seeing onshoring, reshoring. We're seeing movement of manufacturing, for example, into India for the first time in a serious way. So my sense is, the industry won't outrun the macroeconomic conditions. But overall, I think the lending, in terms of where demand will be, will be softer than probably normal.

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

Yes. Maybe, Vivek, just -- first, just to emphasize something that we said in the prepared remarks, all subsegments in industrial grew in the fourth quarter, and we feel pretty good about where we are. From a strength in industrial versus the other markets, I'd look at it 2 ways. First, from a supply standpoint as we were seeing demand softening in other markets, we have the ability to use our hybrid model to get more wafers from our external partners, and we are biasing this additional supply into the industrial market, which has remained resilient and strong.

At the same time, recall, we made a decision early in the supply disruption to make sure that we were taking care of our broad market and our smaller customers who tend to be more on the industrial side. From a demand standpoint, the strength and resilience in the industrial kind of speaks to where we play. We have extremely high share in those markets. And maybe to note versus our peers, some of our peers have cited weakness in, I think they're calling it, consumer industrial. We, on the other hand, put that business into our consumer. We call it the prosumer business, professional audio, video, et cetera. So when comparing us to peers, you'll see that our industrial might maybe more pure industrial.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. I think as well, for the last decade, 12, 13 years, we've been treating industrial as the bedrock of the company. So it gets first call on R&D investments, customer engagements. And never have we been more diverse in terms of geographies, customer coverage, depth of coverage, depth of engagement. So -- and also, we have product life cycles that stretch into the decades with very, very stable pricing. So I think all those factors combine to make this an extremely strong business currently, and we're very, very bullish about the future here as well.

Operator

The next question comes from Joshua Buchalter with Cowen.

Joshua Louis Buchalter - *Cowen and Company, LLC, Research Division - VP*

I wanted to ask you about inventory levels and thank you in the prepared remarks for all the color there. Totally understand the finished goods and die bank dynamics, along with the lean channel levels, but I was wondering at what range would we be at the point where you have to start taking proactive measures to lower inventories. I fully realize you haven't given an inventory target, but can you help us, just directionally, understand how you're thinking about that?

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

So let me start with fourth quarter. Balance sheet days are up to about 140 and the channel is flattish, and it's still below our desired 7 to 8 week target. So the growth in inventory that you're seeing in our balance sheet is coming from a couple of different drivers. Certainly, inflation for our cost of goods, sales growth, which requires us to have more coverage of inventory and then the strategic decisions we made in the prepared remarks. So I do just want to go through that one more time here. So we are temporarily going to hold more finished goods versus putting it into the channel. Because we believe that gives us the flexibility to align the supply with end customer demand across regions and markets. A bad outcome for us would be to give product to a particular distributor who doesn't have an end customer demand for that product where someone else in a different market or geography is in need.

Second, the die bank has really been dried out over the last couple of years. And I think I said at some level, it's below 50% of where we want it. So die bank, for us and for folks who may be less familiar with it, this is a product that has finished the front end but before it goes to assembly and test. This allows us to get it through the back end in roughly 4 weeks. So it's quick turn, and it gives us maximum flexibility to put it across different markets. So investing in the die bank will help us get our service levels, which are critical for us, given the focus we have on customer service, critical for us to get those levels back up.

So the result is, expect higher days in the first half and then it will trend back down as finished goods burn out and the die bank comes to where we would like it to be. So our goal for the inventory is to get our lead times down to our old target, which was roughly 90% of our goods can be shipped within 4 to 8 weeks. And given the long life of our products, we always carry a pretty minimal risk of obsolescence.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

And Josh, one thing to add, you asked about utilization when are we thinking about taking them down. One thing I wanted to point out is about our swing capacity and cross-qualification. So before we pull down our internal utilization, we'll bring what we can back in from external, internal to support utilization and our gross margins.

Operator

The next question today comes from Ambrish Srivastava with BMO Capital.

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

I'm going to ask the same question. I think we're all struggling with it. You guys won a lot of accolades for being super transparent last earnings call. We were talking about the order trends. I think Vivek asked the right question, were you surprised? Is there a seasonality to it? I mean nobody doubts your positioning and how strong you are in your chosen markets.

And Prashanth, thanks for clarifying the prosumer versus other companies calling it legacy industrial. But is there a seasonal aspect to it as well that orders stabilize because it's very contrary to what we are seeing and hearing from other companies report including many industrial companies. Because last time, you had said that you expected -- although order cancellations were very small, you expected them to climb in the current quarter. So I would love to get a little bit more color on that. And then a real quick tactical one on lead times. Where are the lead times now?

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

Sure. Yes. Let me just make a comment on cancellation. So we provided cancellations as a metric that we watch in the third quarter because we wanted to give everyone some context that we saw an inflection happening with orders. So it was in the spirit of transparency. However, I don't want to get into a pattern of reporting cancellation data every quarter. So if it was something meaningful, we would have called it out, which we didn't. So you can read that for what it is.

I would say that unlike others in the industry, we are proactively analyzing our backlog and working with customers to remove orders that they no longer want given the rapidly changing environment. So this strategy, for us, is to seek out cancellation. It helps us align our backlog with current demand, and it really gives us better visibility into where the supply needs and what we need to build. So that has increased our confidence in the quality of the backlog we have. It is still -- the coverage is out still over a year, but it is down sequentially. And so while we're always mindful that there can be some continued noise in that backlog, we feel pretty good about both the guide, and as we mentioned, the near term.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. I think the diversities, Ambrish, of the business, in general, is stronger than it's ever been. We're getting benefit. We're winning share in the power management market, in that sector of our portfolio. And I think if you look at where we are in the Automotive sector, we're getting a very strong tailwind from the electrification of the vehicle. In fact, we're gaining a lot of share in general, I think, with in-cabin and the electric vehicle. So I think we've got some tailwinds that are transcending the macro cycle here as well. The only part of the business, I would say, that has a cyclical timber to it now is the consumer area, where we have seen kind of the normal pattern there at the -- which happens at the tail end of the year.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

You had the question on lead times, Ambrish. The lead times, actually, in the quarter, they have come down. I would say they're still extremely high and much higher than we want them to get. And Prashanth talked about how he wants to -- how we want to increase our inventory to bring down those lead times, but we have some products that are on time, and in some products, our lead times are 52 weeks. So lead times have come down overall sequentially from 3Q to 4Q, and that's reflected in kind of our outlook, our backlog, cancellations, everything that we gave you.

Operator

The next question comes from Stacy Rasgon with Bernstein.

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

I had a quick housekeeping question and then a broader one. The housekeeping question. You had an extra week in Q1 '18. So Q1 '23 would be 5 years later. Is there an extra week in the guide at all? And on the broader question, you talked about some of the OpEx levers that you have. I think last quarter, you talked about, like, in a 15% revenue down year, you could keep gross margins above 70%. I guess the question is, do you still believe that? And what would OpEx do in a scenario like that? What are some of the levers you would pull?

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

I'll do the housekeeping. No, I guess our outlook was very, very strong, given you thought it would be a 14-week quarter, it's not. Our first quarter in '23 is a 13-week quarter. Our next 14-week quarter will be in 2024. So to repeat the outlook for 1Q is a 13-week quarter.

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

Okay. And I think your question really is on the downturn scenario analysis. I'll just -- I'll restate that, Stacy. We've covered that a few times, but we put our gross margin floor out there at 70%, and we did that because we have confidence that we have the levers given the flexibility of our hybrid manufacturing model and the resiliency of our business that it's unlikely that we're going to pass through that.

So we tested that at a down 15%. And what we've shared with folks in the past is that a down 15% is quite comfortable that we can stay north of that 70% and the OpEx levers for us would be the -- about 80% of our OpEx is fixed or less variable in nature, which leaves us about 20% on the levers that we can work with to ensure that we keep operating margins north of 40%.

I will say that for 2023, our commitment is, and as Vince often says, we run this company for the long term. So we are committed to continuing to invest throughout the course of '23. We'll, obviously, be mindful of the environment. And if we see a change that warrants us to take action, you can count on us to take action. But we, at least for the next quarter or 2, expect us to continue to make the right decisions for the long-term health of the business.

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

That sounds like OpEx ticks up a little bit into Q1 as well, just based on what you just said?

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

You read it well, Stacy.

Operator

The next question comes from William Stein with Truist Securities.

William Stein - *Truist Securities, Inc., Research Division - MD*

I'm hoping to hit on the inventory question yet again. You've done a very straightforward, good job of explaining to us what's going on in your own inventory. And it sounds like distribution is still below your target even though on their balance sheets, across all their suppliers, it looks like they're elevated. But we've seen other parts of the supply chain, in particular, the manufacturing services companies, which I imagine are a big percentage of sort of your counterparty sales on transactions. And I'm wondering to what degree you've scrubbed that half channel, half customer, however you want to look at it, for extra inventory that could hurt demand going forward?

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

Great question. Let me -- I'll -- let me do the easy part of that, and that is, sell-in is essentially equal to sell-through. So from a channel standpoint, we're well aligned and our channel partners are not building inventory. I made the comment that we're holding some finished goods on our own balance sheet. From a customer standpoint, I think Vince has had a lot of conversations with customers. So I'm going to pass to him to talk about what he's hearing from them.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. I don't think our customers are in the mode of building safety stocks. There are mismatches, I think. There's the well-described golden screw problem. It's probably a base when compared to where it was 6 months ago, but I don't think customers -- there's no major inventory building going on right now. And I think our customers are doing their best to match their orders and the product supply to be able to create finished goods. So they're not there yet. I think there is still some unserved demand that customers are trying to fulfill. So -- but we're working very closely with our customers.

As we've said, we take our signals from sell-through, and we're working with our customers diligently across all 125,000 of them, big and small, to make sure that we get the best match between what they need and what we're able to deliver. And what I'm hearing in general is that, yes, we haven't serviced all the demands that all the customers have needed, but in general, we've been very transparent. Our customers are very pleased with our customer service. And I think it positions us very, very well coming out of the supply crunch to be able to deepen our engagements with our customers, both on the R&D side as well as the supply chain side. And customers are increasingly interested to partner with companies like ADI on both of those dimensions, and we are ready.

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

And we're seeing in the pipeline -- we're seeing it in the pipeline growth.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

And we go to our last question, please?

Operator

The last question today comes from Toshiya Hari with Goldman Sachs.

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

I had one quick housekeeping question and then another broader question. In terms of the housekeeping question, I was curious what did pricing do in fiscal year '22 on a pro forma basis? I think the business grew, what is it, around 25% pro forma. How much of that was pricing? And as you think about fiscal '23 or calendar '23, is the expectation for foundry costs to increase in the out year as well?

And then my broader question is probably for Vince. As you think about the full year '23, based on your backlog, based on your design wins and customer conversations, which end markets or applications are you most excited about in terms of contribution to growth? I realize you run a diverse business, and that's the beauty of ADI. But if you were to single out a couple, where your expectations are the highest, which ones would they be? And which end markets or applications would you be most worried about?

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

Sure. Toshiya, let me take the first one quickly. So for '22, growth was fairly balanced and about half of that is coming from ASPs. But I do want to emphasize something that we've said over the course of all of '22, we passed cost through to customers. We did not use that environment to raise our gross margins. That was how we did the calculation of how much price to pass on to a customer was based on the input costs that were relevant to those customers. So with that, I'll let Vince take the more interesting part.

Vincent T. Roche - *Analog Devices, Inc. - CEO & Chair of the Board of Directors*

Yes. So yes, I think in terms of '23, the markets that have been performing very, very well for the company over the last couple of years, particularly Automotive, which we've already talked about, the electrification of the vehicle, we're very, very well positioned there. And we're winning a lot of share in the in-cabin electronics as well; the new display systems, which are very, very complex. The dashboard displays need a lot of very, very clever power electronics. So we're well positioned.

From an Industrial perspective as well, digital health care has been growing in the company in double digits for the last 7 years or thereabouts. We expect to see that continue. Also, aerospace and defense, that's likely to be a very brisk business. It's performing well for ADI now, and I believe, at least for the next 5 years, we will see stellar growth in that area. And energy, our energy and sustainability businesses are also beginning to really go on the uptick. So where am I concerned? I'm not really concerned about the business in general, given the diversity that we have, diversity of customers, products, applications. 5G perhaps we'll see what is likely to be weakness in Europe, offset by growth in India, growth in O-RAN, steadiness in the U.S., and that kind of summarizes how we think about things.

Michael C. Lucarelli - *Analog Devices, Inc. - VP, IR and FP&A*

Thanks, everyone, for joining us on the call this morning. Prashanth and I will be at CES this year hosting meetings. We also have a booth on the showroom floor where we have technology demos across auto, health care and consumer. We hope to see you there. And with that, have a great Thanksgiving, and thanks for joining the call.

Operator

This concludes today's Analog Devices conference call. You may now disconnect.
