Hello. Good morning, everybody. Apologies for the delay. This is Ambrish Srivastava. I cover semis. Welcome to BMO's Virtual 2020 Tech conference, Tech Summit, and I'm really happy to have Vince Roche joining us from Analog Devices. Vince, good morning. Welcome.

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

Good morning.

QUESTIONS AND ANSWERS

Before we get into it, I just wanted to wish everybody's safety, safe health. And Vince, thanks again. Before we get into -- if you don't mind, if I could just start with the near term, you just reported earnings. So maybe if you could please recap for our listeners, how you see business trending in the near term. And also, on Huawei to ADI?

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

Yes. Thank you, Ambrish. Good morning, everybody. So we had a quarter that exceeded our original expectations. So we had very strong results in our communications business, in our industrial business, both together combined, were about 80% of our total. We saw continuing weakness in the automotive sector and actually reasonably good results in our portable sector of consumer, but also our B2B sector in consumer, which is largely about enterprise, audio, video, that suffered some demand decline during the quarter. So overall, we got back in terms of gross margin and operating profit well within our business -- our financial model targets. So we're very, very pleased about that. To answer your question on Huawei.

So yes, it seems pretty definitive that unless licenses are granted in mid- to late September, that shipments to Huawei are going to be embargoed essentially. So the way we view it, Huawei has been diminishing in scale for ADI over the last several quarters. It is in the low single-digit area now. And we -- obviously, we will be applying for licenses to make sure that we can keep our product flow going. But at this point in time, the situation is very uncertain. And we view the situation as more opportunistic than strategic at this point in time as regards long term supply.

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

Okay. Okay. That's helpful. I wanted to switch over to the strategic. And I apologize, I didn't even give you a chance to make any introductory remarks, but I assume everybody's so familiar with Analog Devices. I thought -- in the earnings call, I thought you did a great job of framing the strategic priorities for ADI. So I wanted to go a little bit deeper into that, specifically on your M&A track record. So first of all, if you could please remind us, again, frame for us what are the priorities for ADI. And then here are the questions, and it has a few subparts. But I'll let you finish the -- going over the framework, and then I'll go into the questions.
Vincent T. Roche - Analog Devices, Inc. - President, CEO & Director

Yes. So the strategic priorities, Ambrish, for us, are #1, to reinvest in our business to -- we have been spending 18% to 20% of revenues in R&D over the last several years. So reinvesting in our business to drive innovation, to be able to drive the kinds of cutting-edge technologies into the B2B space as a first priority. That is the essence of what we do to make sure that we keep the business growing profitably over the long, long term. We have been using, obviously, the balance sheet on the M&A side to acquire assets that both increased our scope, which is critically important as well as scale. And the way I view M&A for ADI is that customers are asking us to do more and more. It’s our job to get ahead of our customers and their needs in terms of technology and the kind of solutions that they need us to develop over the long term. And that’s what we’ve been doing with Hittite on the microwave and RF side of things with LTE on the very, very high-performance power and precision signal processing side of things. And the latest acquisition of Maxim increases our scale and our scope, enables us to bring 10,000 engineers with $1.5 billion of R&D, pointed out the most important problems that we think need solving over the next 5, 10 years. And that’s essentially what we are doing in terms of the organic as well as the inorganic.

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

Okay. So maybe I’ll start with an observation first and then go into the specific questions. So Hittite, you guys have done a really good job. And correct me if I’m wrong, you have grown the business from roughly $270 million, $280 million run rate -- annual run rate when you acquired it to now, it sounds like it’s a little bit higher than $500 million over a period of 6 years, which is very creditable given -- we all understand this is analog slow moving. So the question then -- that I have then are -- and this is not a strategic one because I -- because we get it by Maxim and as you explained, it gives you scale, it really expands your footprint. But -- so number one, how has Linear done since you acquired it? If you would be willing to share some data with us as you have been sharing with us, and Hittite. And then on Maxim, and you touched on it a little bit on the earnings call. A, why now? And more importantly, talk about how you think about generating a return on the investment. And I believe you said on the earnings call that you’re looking at like a 5-year horizon for this. So if you can address both those?

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

Yes. Thanks, Ambrish. So in terms of LTC progress, around 3 or 4 quarters ago, I had mentioned that we had put about -- we had said at the outset of the acquisition that it was our goal to double the growth rate of LTC over a 5-year kind of period, and we’re well on track. After the first couple of years, we have put about a 100 basis points of growth, atop the LTC kind of historical run rate, and we are -- this year, to know, we put about so we’re 3 – 3 and a bit years into the acquisition. We’ve generated design wins of around $0.5 billion across the entire portfolio, mainly in the power area, but also in the precision signal processing space, where we’ve been able to attach the LTC technologies into critical application areas like automotive, where across the board in terms of lighting, cabin electronics, the electric vehicle side of things, we’ve been able to retain the gains that LT made and increase our share of that market. So I think those are the 2 important points to remember. So we’ve already been able to establish growth. We’ve an excellent pipeline that continues to accelerate in terms of inputs and being able to convert the input to an output. So my expectation is that we will be able to hit the targets over the next couple of years in terms of doubling the LT growth rate just based on success so far and the pipeline that we’ve got. Moving on to Maxim, Ambrish, why now with Maxim? Well, Maxim is a company that prides itself as well ideologically around innovation and customer success. So it was always on the radar screen for ADI. There’s good alignment between how we approach the markets, how we approach technology and how we deal with our customers. So there’s a tremendous asymmetry developing between the needs of our customers and their capacity to actually do the analog job, the analog job that -- that’s the task that sits between the world of the physical and the world of the digital. What we’re seeing across the globe is that our customers are in more and more need of outside help to be able to engineer the analog. And we’re looking, as I said, over the next 5, 10 years, and believe that as the destination for the world’s best analog engineers, we’ll be best positioned to solve our customers’ most important problems in our chosen markets in the B2B and selected areas of consumer.

So and the -- as I said, Maxim has always been a company we’ve admired, and we’ve also absorbed LT. So we’re 3 years plus into the integration with LT. So the timing is good. We’ve got the progress that we need on the LTC side, building momentum on our product road maps, converting the opportunities and getting the cultures combined. So it was really that. And sooner is better because there’s a lot of urgency, I think, to be able to align our product road maps with where our customers are moving over the long term. And certainly, Maxim will help us more with that.
In terms of return, I did mention in my prepared remarks on last week’s earnings call that we view returns, I think you’ve got to look 5 years out to be able to gauge the success from a return standpoint. ROIC, it takes us 4, 5, 6 years to be able to get the level of revenue growth and be able to capture the synergies in terms of efficiencies across the companies. With LTE, the synergies where, as I said, will be 4 years in before we’ve captured all the cost synergies. Originally, we had said $150 million in terms of the combined operating and cost of goods synergies, where we’ll actually capture about $250 million over a 4-year period, and you’ll see the benefit of that coming in 2021 when we finish that process. But I think that’s how you’ve got to look at it, that we focus on the generation of long-term profitable growth, capturing the synergies that we think are realistic and more natural. And I think that’s how you’ve got to look at it, that’s how you view what we’ve done with Hittite, with LTC and what we’ll do with Maxim as well. You’ve got to look over kind of a 5-year snapshot here.

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

Yes. That makes sense. And I’ll second that talk about Maxim. I’ve always respected them, especially how Twitch has been able to refocus away from consumer into kind of more in your wheelhouse in the catalog. So that’s why I said strategically when you made the announcement, that was not the question that I had. It was more around how do you turn it around to get the return. So the segue then is -- and this is -- again, staying with the longer term, the place of ADI, and you and I have had this conversation on this topic actually quite a few times, but it has been a while since we addressed this, and you brought it up earlier. What are the problems that ADI is trying to solve. I think you had explained it to me a few years ago, when I was trying to learn the ADI story under you, you had said, Ambrish, it’s not the component supplier anymore. What -- my vision is to turn this from that to a system solution. So how has that evolved in your tenure as CEO?

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

Yes. It’s a good question. There are really 2 parts to ADI. There’s the -- if you look at the structure of the markets inside ADI, the industrial market has tens of thousands of customers. And for that, you’ve got to have tremendous flexibility in terms of offerings. And so the way I view that, you develop the building blocks, be they in signal chain or of microwave, power, whatever the technology. And that is the primary go-to-market vehicle, if you like, for the industrial sector. You’ve got to have all the component building blocks. And over time, there are places where you take those core capabilities. So we have tens of thousands of customers who will always buy the building block devices. They persist for often decades in the applications in which we play. But there are places where we can afford, and we ought to perform deep integrations in areas like software-defined transceivers, for example, for 5G radio systems, where we can get the returns on investment, and we can solve the problem very specifically for the customer in terms of the performance, the footprint, the power efficiency and, of course, the cost. Automotive is another area, where there’s more concentration in terms of customers, fewer applications. We also sell, by the way, even, where, today, we offer highly integrated solutions in the radio system for 5G or the battery system for cars. There tends to be also the opportunity to bring the more generic or general purpose type products to bear as well. So our business, Ambrish, I’d say, it requires us to do the aggressive system-level integration in areas like communications, be it optical, be it wireless radio systems, but also to have the more generalist building block approach. So ADI is a very nuanced company. The Analog business is very nuanced. So we have the entire tool set. We build the platforms -- the technology platforms. We build the products that can go into thousands of customers and the products that go into a very select few or tens of customers in the more high-volume markets in consumer and communications infrastructure as well as automotive. So I think that’s how you’ve got to think about it.

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

Okay. Okay. Let me switch a little bit to what we are all have been undergoing for the last 6 months and doesn’t seem like this is going to change. And this is the pandemic, and your thinking. So how has that shifted your thinking, whether it’s on the supply chain or whether on areas you would like to focus more on? Because customer interactions are going to stay very different for a long time. And for instance, I know health care is one of your favorite areas over the long term, and you’ve been talking about it, investing more in it. So clearly, the pandemic has implications for that. And then speaking of bandwidth, here I am. I brave the fire warning to come to the office, and I can’t get onto the network. So bandwidth and 5G. And I think also transportation. So how is your thinking now different with the result of what you’ve seen? And how is that going to evolve?
Vincent T. Roche - Analog Devices, Inc. - President, CEO & Director

Yes. Good question. So I think the things we're doing will persist through the pandemic. The technologies we're building, the solutions we're offering will be pervasive and persistent for many, many years to come. We have obviously a -- we've products that we sell today that are sometimes 30, 40 years old that have survived many, many, many different dynamics, many, many different eras of turbulence and economic cycles and so on. But the way I think when you look at the pandemic and what it's done, I think it's accelerating some already in place dynamics around. For example, online retail has had a tremendous boost. There will be some form of hybridized work for many, many years to come, I believe. So I think that bodes well in terms of the build-out of advanced networks, 5G, the optical networks, cable networks and so on, on a global basis to be able to get the kind of quality of service and the bandwidth that people need to be able to operate effectively.

Healthcare, I believe, has many, many challenges around affordability, accessibility. And we've got to shift the care element towards wellness rather than acute care. So that, I believe, we've seen tremendous strength, not surprisingly during the cycle here in terms of advanced communications as well as health care. But I believe that health care, in general, will start seeing a lot more investment across the globe to be able to solve those 3 critical problems, I've just mentioned. Automotive is an interesting one. Because while there's been a trend, SAAR has been struggling over the last several years, but the pandemic here probably has dealt some long-term damage to public transportation, which probably indicates that there's going to be a move back to individualistic transportation. So my sense is, we've begun to see a very, very slow recovery in the automotive sector, but there may be a longer-term persistent return, if you like, to individualize transportation, the use of cars and so on and so forth. So whatever it is, Ambrish, we're looking to get better and better data about the physical world, and we're the place where data is born. We produce the highest quality data in the world of semiconductors. And that's the task that we've been performing for decades now, and I see decades more opportunity for this company across all these different market spaces and diverse. As you know, innovation is the root of who we are and diversity is how we create optionality for our business and how we create as well stability in our business in good times and challenging times like we've seen for the last 6 months or so.

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

Yes. You made an interesting point on transportation because before the pandemic, the thinking was, who's going to have cars? We're going to either use a (inaudible) share or it's the end of days for having individual cars. Let me just shift -- just taking the longer-term just shift to the analog industry. They have structural transformations going on. Clearly, no company is immune to business cycles. But when I look at the Analog model, especially compared to the last recession, big positive changes. And I'm a huge fan of the business model, ton of free cash flow, software like operating margins, and that, too, without a ton of recurring revenues, at least as we know it to occur in the software business. But the questions then are, what changes have you seen over the last 10 years that have -- either besides consolidation that have impacted your business. Is it better pricing, sticky relationships? And again, while not immune, given that there are such few companies left addressing these markets, in a way, give you better visibility into your business? And then the second part of it, as it relates to ADI, besides the M&A that we've talked about, what have you done to -- and what are you doing to make sure that you sustain the structural changes that your business has undergone over the last decade?

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

Yes. So one of the critical changes, of course, is that, you know when I joined the analog industry over 30 years ago, there was a fair evenness of understanding the capability of the technologies between ourselves and our customers. But that has clearly shifted dramatically. The -- there's an asymmetry now. The key analog companies really are the repositories of most of the analog knowledge. And customers are saying they want us to provide them with more complete solutions, whether that's smaller customers who are using the kit bag of building blocks or the application-specific customers who want us to build a world's most complete 5G radio subsystems. That's a tremendous change in terms of how they work, if you like, how the labor is now being divided. And that requires more and more scale to be able to satisfy our customers' needs over the long term. I think in terms of the life cycles of products, have actually remained very, very consistent. If I look at the industrial space, the average life cycle there, I think, is 15 or 17 years. That hasn't changed.

The cycles have clearly speeded up. The innovation cycles are faster for surge and the complexity is increasing. So for a company like ADI, it's incumbent upon us to get ahead of that complexity and to continue to do the things necessary to keep the speed of innovation up. So the supply lines have become more sophisticated. I think in terms of being able to read demand and produce supply. So we're better at managing the cycles...
than we used to be, getting that balance between real consumption and the supply. And pricing too has become steadier. I think I've mentioned before several times in different forums that the industry has shifted more to customers requiring consistency of service, be it on the technology development side or the supply side, continuity of supply being really critical, particularly in areas like the industrial sector. So I think there's been a lot less emphasis on price. Now that doesn't mean that pricing isn't important; of course, it is. But in our business, it's more about the technology value that we bring. We get there first. We tend to establish the pricing levels that reflect the value of what we are developing. So I think that's where we have the most competition. I think it's at the early stages and where we're getting the sockets established. Once established, the life cycles tend to be very consistent, and the pricing tends to be very, very steady as well. Of course, different markets have different competitive dynamics. But I think it's true to say that pricing declines over the long-term across all our markets have been kind of asymptoting towards 0.

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

Wow, interesting. And then just a quick follow-up. You mentioned the life cycle and getting back to -- there's you and there's a little friendly competitor of yours from Texas, 40% op margins. So there has to be a component of business that you get that could be thought of as recurring, right? What's the percentage?

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

Yes. Well, I think there's 2 ways to look at recurring, Ambrish. There's hardware recurring and, let's say, software or service recurring. Now when you get life cycles in our business of -- we're providing differentiated products and technologies. I would view the hardware component of our business, particularly in the longer life cycle areas like industrial, like communications, I would view those as recurring revenue streams. Increasingly, we're finding ways. We've been acquiring companies. We have taken some very, very interesting system-level approaches, for example, in the industrial area, where we're beginning to, not only sell the hardware, but we're also now beginning to sell algorithmic capability. We're beginning to sell services in there. I think it's the very, very early stages of what I guess in the world of finance, we would consider to be recurring revenue streams. But I think it's important to remember the persistence of the hardware solutions that we have. And now we've got the opportunity in areas like digital health care, parts of the industrial sector. And in communications, by the way, we accrue today, and not insignificant revenue stream from software algorithmic technologies that partner and are hand-in-glove with the hardware that we develop.

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

Interesting. Vince, I'm going to pause here and see if there are questions from the audience, (inaudible) You can't see me. Otherwise, I'll point to the right -- to the right of this screen, you should see an ability to ask questions. Feel free to pose a question if you have any. And Vince, I'll just pause for a couple of seconds, see if there are any questions. Because I have a long list, I'll keep on going. Okay. Okay, I'll keep checking again. So one of the areas that, obviously, you are very excited about is comm's and your position in 5G versus 4G. So maybe spend a few minutes on that, and I'm going to toggle back to medium-term here.

Yes. So if you look at comms, if you -- 4G, let's step back to 4G for a second. That business was -- everybody as lumpy as the generation that came before it, 3G, 2G, you've got very few carriers across the globe. You get -- it's a very contractually-oriented business, so it tends to be very, very lumpy. But if I look at 4G over its life, it grew mid-single digits over 6 or 7 years. Now given that we have a lot more content. We've got 4x more content in the 5G sector. So there's a lot more white space that we've captured as a company. So the value per system has increased. We have a
very, very strong market share in the classic sub-6 gig radio systems, these multi-band radio systems, which are incredibly complex and much more complex than anything in 4G. The microwave technologies that we’ve got. And now we’re beginning to attach power as well. So we get -- that is another white space for ADI, if you like, within the radio system. So optimizing the entire system. So I think the way you’ve got to look at 5G, Ambrish, as well is that it’s going to be lumpy. It is just the nature of the communications infrastructure business. And it will go in leap and bounds over multiple years as carriers begin to, first off, deploy the capabilities and then begin the process of densification.

So today, it’s really a case of 5G taking route in Asia. We’re beginning to see the early shoots, I think, in the U.S. now as well. And Europe, I think, somewhere towards the back end of the coming year will also begin to emerge as a user of 5G, but very, very early stages, I think, everywhere. So I foresee multiple years of growth in 5G. And I remind people as well, 5G isn’t just about the consumer. 5G was designed as a provisionable quality of service technology with low latency and service provided across different application sectors depending on bandwidth needs. So we’re also beginning to see the emergence of 5G in the areas of factory automation. It’s at the very early stages of adoption in health care and potentially other areas like automotive as well. So it’s going to have, I believe, a longer, more pervasive cycle than anything that’s come before it because the B2B sector will be a user of 5G in a way that none of the other standards ever -- were ever deployed. So what are areas am I excited about? Well, the -- one of the things that excited me most about the acquisition of LTC, of course, was the power franchise, and we’ve been able to bring that into particularly larger customers, what we call our strategic and key accounts, the top 120 or 150 accounts in a way that LT never competed when they were an independent company. So I think that's tremendously exciting and is an opportunity for us to tap into -- and I've used this metric before, the ADI mixed-signal technologies. For every $3 that were sold there, there was only $1 of power. Power is half the analog market. It's a fast-growing part of the analog market. So we have an opportunity to really even out those 2 pieces, to keep building our share in mixed-signal and accelerate our share in power to be able to fill that gap between 3 and 1.

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

Okay.

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

Health care, of course, is a space, where, as I said earlier, there’s enormous opportunity. And the digitalization of health care, I think, is going to move on in earnest. And we have some very, very interesting conversations ongoing with traditional customers and customers who are trying to change the world of health care with new ways of thinking about it. And I’ll add one other thing. There are many, many things I can talk about, but the optical communication side of our business, where 1/3 of ADI is greater than $1 billion communications business is in wireline technologies. Power solutions that are being targeted there at things like optical control, for example, in 100 gig, 400-gig and terabit communication systems. So that’s a place that doesn’t get a lot of airtime, but it is important, and will be -- well, I think, the pervasive space for ADI for many, many years to come.

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

Okay. I actually have a question from the line. And this is -- do you anticipate the Maxim acquisition to provide similar OpEx and COGS synergy as you did from Linear, and then also a similar revenue synergy? So that’s part one of the question. The second one -- the second part is Linear was highly accretive because of the big debt component, why are you using all equity for Maxim?

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

Yes. So in terms of synergy, we’ve already committed $275 million of synergies across the combined companies. I believe that’s a very realistic target. And that’s what we’re committed to. In terms of revenue, the B2B business of Maxim actually has been growing at kind of 4%, 5% now for the recent years. And the overall growth of Maxim has been dampened by the decline of their consumer business. So I expect that will bottom out over the next couple of years. But my expectation is that we -- when we combine with Maxim, given the greater channel to market that ADI has, 3x plus the sales force scale applications for scale. So my sense is, given the anchor franchises that ADI has got with a lot of complementary products
and technologies that Maxim has got, we can get that growth rate over time into the mid-single-digit kind of area. Why did we use all-stock because the environment in which we're operating is so uncertain, we decided that it was better to use stock than use debt. And the Boards of both companies have been very, very excited about the possibility of putting the companies together and being able to increase the valuation of the combined entity at the kind of rate that we've done since acquiring LTC. So I think it kind of hedges the risk by keeping debt down. And remember as well, when we put the companies together, the -- at the time of announcement, the debt-to-EBITDA was on a pro rata basis, about 1.2. I expect by the time we get to the closure in 2021, that debt-to-EBITDA will be in kind of the 1 area. So it gives us tremendous flexibility through a period of -- we hedge the uncertainty now. But when we get to the end game here, the endpoint, we'll have tremendous flexibility in terms of the use of our cash essentially. And I think that's important to remember.

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

Okay. Okay. There's another one incoming. This is the confidence around the Chinese regulatory approval. Could you talk a little bit about the confidence on that front?

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

Yes. Well, obviously, we've gone through the process twice with 2 public companies, Hittite and LT, we have -- I've paid a lot of attention to the advice that we've been taking from external third parties who understand the legal and regulatory system in China. So my belief is that there is a finite risk, of course, that the regulatory process will be a bit more narrowly than we would expect. But given our knowledge of things, given our experience, my confidence is high that we will get approval across the globe and be ready to combine the companies in the summer of 2021.

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

Okay. Vince, before we sign off, I just wanted to give you the opportunity if you had any closing remarks, as we are coming to the conclusion of our conversation.

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

Yes. Thanks, Ambrish. So I think when you look at the business in which we're playing, and if I look farther out, the world, there's an expression that floats around that data is the new oil, and we are a very, very important part of being able to generate very, very accurate views of the physical world and translate into the world with digital. So I've been in the business now. ADI has been in the business 55 years. So we have a lot of (inaudible) knowledge. We're good at reading markets. We're good at placing our technologies ahead of these markets. And I think the needs, there will be -- you'll see more and more ubiquitous sensing, ubiquitous connectivity. And you're going to see it across all aspects of the economy. You're going to see it across all aspects of our lives. So I think as an analog company that is focused on creating the richest streams of technology that can enable the best representations of the physical world into the world of the digital and vice versa, I think we're very, very well positioned. And I've been with ADI more than 30 years now. And I believe that our best years are all still ahead of us.

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

Awesome. Great. Listen, Vince, it's always a pleasure to speak with you. Thank you for joining us. I wish you all the best. And look forward to talking to you again. For our viewers or listeners who are joining in, we're going to take a 15-minute break, and then we'll be back with our next conversation. Thank you.

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

Thank you, Ambrish. Thank you, everybody. Bye-bye.