



Christina: Good morning. Good afternoon, everyone. It's Christina, your friendly neighborhood semiconductor analyst here at Citigroup. It's our pleasure to introduce by rated analog devices, the Burger King SMEs, what does that mean? You can basically have it your way if you own ADI. If you want a dividend, they have one of the highest yields in semis and also a double digit dividend growth. If you want high margins, they have some of the highest, if not the highest margins in semis. If you want plain old fashioned growth, one of the best, earnings growth in the coverage universe over the last several years. And if you want M&A they're one of the more successful M&A companies out there. And we'll be talking about that today. It's my pleasure to have Vince Roche, the CEO of Analog Devices. We also have Mike Lucarelli, the investor relations guru on the call as well. Vince, thanks very much for attending.

Vince Roche: Thanks for having me, Chris. Good morning.

Christina: Great. Actually, before we dig into all the Maxim fun things, I see that you guys just announced a deal to supply battery management systems for electric vehicles with General Motors. This is pretty cool. Can you just talk about that for a little bit and then we'll dig into the other topics.

Vince Roche: Yeah, thanks Chris. Yeah, we have brought what is really a game changing technology to the way electric power trains can be built for cars in future. Today all of the solutions are very much built on wiring harnesses and the movement of the metrology and the data and the car is done, with wire technology, this really changes the game and that we can reduce the wiring harness by about 90% in terms of its extent. It decreases weight, it increases reliability of the system, and it enables us as well to, when you don't have to use a wiring harness anymore, at least a very reduced wiring harness, the configurability of batteries becomes much easier, much more flexible.

So, the basic technology that you put in one car and one configuration for the battery can be used in all the different configurations for all the different models that get built. And the other neat thing I think about the technology is that we are using it across the life cycle of the battery. In the formation deployment, and the end of lifeing as well, we're able to, with this technology

collect data on the state and health of batteries, right from formation through disposal.

Christina: Great. And by the way, the planet seems to be moving to electric vehicles at warp speed, can you just give us a sense of your average content per EV versus the average content per car today?

Vince Roche: For us it would be in terms of, well, we have a very, very little business, I would say in the internal combustion engine. So this is all really white space technology for us. We have the first generations, we're on our fourth generation, I think, third or fourth generation of a traditional wiring harness battery management solution. This wireless technology will actually just about double the available market for the company in the years ahead.

Christina: I like markets to double. Okay. So let's jump on in, I think you guys are one of the more, recent semiconductor companies to report the quarter just two, three weeks ago. Maybe give us a brief summary of what you said last month, and then we'll dig into a couple of the topics that came up on the call?

Vince Roche: Yeah, sure. I think Chris, the first part of the year was tough for everybody. It was tough for ADI. What we saw from March through our earnings call there a few weeks ago was, I think, bottoming out on somewhat a recovery, particularly in areas like wired and wireless communications. The industrial business actually year over year was up across the globe, different permutations in different regions, but overall was up. And our healthcare business in particular performed extraordinarily well. And it has been growing for several years and this was really a bumper year as the infrastructure was built out at a much faster clip than normal.

I'd say the growth we saw, and the strength that we saw in those B2B markets was offset by automotive, which had a pretty darier so far, but we're starting to see the recovery now and that's built into our fourth quarter plan. And the consumer business, particularly what I would call the enterprise level consumer business, particularly what we call prosumer AV, the building block technologies for high quality enterprise level audio video, that's had a tough year as well.

But I think, people ask, "When was the bottom? What is the bottom? When do we see recovery?" My sense is that 2021 will be a growth year for ADI and for the semi industry. And there may be some perturbations between now and then, but my sense is we'll be back on a growth track solidly in 2021.

Christina: Great. Just to run through those end markets, you talked about your communications business bouncing back very nicely. You've long had a lot of success in the comm business. Why do you think your comm business bounced back so hard and so fast? Is that just ADI success and market positioning? Or do you think that there's some other market factors going on in there such as, 5G build-outs or anything else going on in that end market?

Vince Roche: Yeah, I think there's really two pieces to it, Chris, and I'll talk about both separately. On the wireless side of things, we've had a very, very strong position in 4G over the many, many years, but 5G is earnestly being built up now. And we have several times more content in a typical 5G radio system. And we're also beginning to attach our power technologies to the radio system. So we have coverage from the microwave to the bits, and we've got the power technologies as well now that we can attach. There's a lot more white space that we've been able to bring our technologies to in 5G. With the portfolio that we have, we've been able to grab a very, very good market share there.

On the wireline side of things, with the move to contactless commerce, work from home and so on. There's been a huge upgrade of the backhauled systems, the optical and cable systems, and while wireless represents about two thirds of ADI's comms business, the other third in wireline has actually been doing very well for several years. We've been up around, high single digits, double digit growth levels. There are now for several years, particularly with very precise control systems that are used in the optical modems. That's done particularly well for the company too. I think it's a mixture of, the onslaught of 5G and share gains for the company in both wireless and wireline areas.

Christina: Sure. And then in a similar vein, I believe your industrial businesses is almost back, close to the peak after the recovery over the last couple quarters. You mentioned healthcare, maybe talk about some other drivers on the recovery of the industrial business.

Vince Roche: Yeah, sure. The big pieces of the industrial business for ADI are industrial and process automation, aerospace and defense and instrumentation. We've seen a gradual improvement in factory automation and process control, particularly in Asia over the past several months. Also America has been quite strong and I would say Europe and Japan less, well that's yet to come. I think we're beginning to see bookings improvements in those regions, particularly Europe. So my sense is that given the strength of the industrial sector in Europe, 2021, we'll see a recovery in that particular region.

If I look at an instrumentation business too, lab instrumentation, which uses a lot of our catalog and component technologies has been doing well for several months, I think the explosion in diagnostics in the healthcare sector has definitely helped that, but also data center and cloud activities, which are heavily reliant on power technologies, heavily rely on optical communications technologies. The instrumentation part of that has done well too. So for memory testing, process or testing, we've seen very, very good strength there over the last couple of quarters.

So, not surprisingly in the aerospace and defense area, the avionics part has been quite weak, but the rest of the business has performed just as we had expected. It's remained resilient and strong throughout the economic crisis here. But clearly avionics I think, is going to take several years to get back to the

level that it was. I don't think I've forgotten anything there. That's essentially the summary of our industrial business.

Christina: Yeah, that's a great rundown. And then on the automotive businesses, if I look at your industrial and comm businesses, they basically recovered in the span of a couple of quarters. I believe you mentioned on the call that the bookings were picking up on the automotive side, maybe expound upon that. And do you think that the automotive business could get back to a reasonable level and in a couple quarters? Are you guys seeing a nice recovery in bookings there? And maybe give us just some feedback, because you have such a large diverse automotive business, the market so, well, maybe give us some feedback as to what the automotive industry is saying as far as its own recovery.

Vince Roche: Yeah. Thanks Chris. Maybe I'll just start with the short term and work a little then into the longer term. So yes, we are seeing a recovery. Car plants across the globe were basically shuttered for several months. There's a recovery in activity there. And interestingly SAR is beginning to improve as well. It was stronger than we had expected in America. And with China back into full swing, we've seen an uptick in our powertrain electrification business, the battery management systems there. So I think that's a great secular trend. We're still looking at something less than 2% of all cars being built to their electric that we'll get into the 10, 20% area over the next decade.

And I think we're very nicely positioned there with the streams of, as I talked about earlier, the traditional battery packs, as well as the wireless battery packs, we're very, very well positioned technologically from a share and penetration standpoint there. The area of, and we've talked about this on the last earnings call as well, an area where we're seeing risk demand for our products is in the cabin electronics area. Things like the A2B bus, the thin wiring harness that moves audio media around the car, we've more than 20 OEMs signed up with that technology. So that continues to grow nicely for the company.

On top of that, over the last year or so, we've been building a nice franchise and active road noise cancellation technology. Again, that will add a lot more content value in a car and is a new source of growth for the company. From the safety standpoint, Chris, I think we've talked about this before. We were drew from commodity memes and our old 24 gigahertz radar technologies have been declining. So that, the things I've talked about as tailwinds, but offset by the safety, decline on the safety business.

But I expect to, with our power technologies, with our cabin electronics and the electric powertrain technologies, we should be back, I think, on a solid growth path in the next 18 to 24 months in the automotive area. I think if there's a noteworthy comments as well to be made about the effect of COVID-19 the pandemic on the automotive sector, it's that public transportation is probably going to be on a downward, because of the need for isolation and fears for a spread of the virus. And individual car ownership may be the beneficiary, may improve over the coming quarters and years. I think overall, we're seeing, as I

said, short term, Sara improving and there's potentially a secular trend that could drive Sara as well as I've just outlined here.

Christina: Yeah, that's an interesting take Vince. We're asking every company this, now that we're several months into the pandemic, I hate to say COVID as the new normal, but it sounds like it's going to be here for awhile. What longer term structural changes to your business are you making, are you seeing as a result of COVID, whether it's different growth in end markets than you thought, or just changing operations around analog devices?

Vince Roche: Yeah, well, things we do are very persistent. The technologies we build are very, very long product life cycles. We've kept our pedal to the metal, around the whole R&D activity in the company, our customer engagement activity. And I'd say, if there was one sector where we got a very, very positive impetus, it's been in the healthcare area. So we've actually moved R&D funds into that area. We've a lot of very, very interesting technologies that we are in the process of rolling out and further technologies that will come. And those heels that will begin to share with everybody over the coming months and quarters.

I think in terms of the portfolio, the R&D portfolio, the customer portfolio, we've really just kept working intensely on getting the best products to market, to as many customers as we can. And I think, as we all have to... we've got to ensure that we keep our workforce safe. So working from home, bringing rump and testing into our facilities, across multiple dimensions is something that would be a normal course of life here, but I'd say, we feel good Chris, about where the company is today, where the company is going tomorrow. And so we've kept our investments in place. We've managed expenses very carefully as you will have seen from our P&L. And you've heard from our commentary on the last earnings call.

But I feel very good about the position that this company has at that beautiful nuanced intersection between the physical and digital worlds and bringing the energy systems to bear from our LTC power franchise. As I said, we'll certainly change some human habits, but the things we're doing are persistent and we're investing at record levels in our business because we got this great compounding effect as well. If we innovate well, customers pay good money for our products. If they pay good money for products, we can invest more back in the business. So that's the thesis. And we've got a lot of tailwinds there.

Christina: Great. And speaking of that, I think you're the only semi company that actually announced an acquisition during the middle of the pandemic of Maxim. Maybe if you could just start off how the heck you guys managed to pull this off, and how long had you been eyeing Maxim from an M&A standpoint, and then I'll have a few more questions on that?

Vince Roche: Well, Maxim was always one of the best technology, unlocked technology companies in the industry for several decades, actually. Maxim was always of interest to ADI. And so, we have, I think both companies have similar ethos in

terms of putting innovation first, delighting our customers, and great belief in the power of our technologies. When I look at this, Chris, I never look at an acquisition for the cost synergies, cost synergies are fleeting. You get the benefits, certainly over the long term, but we got credit from the street for a very short period of time. I think what we will be rewarded for and be rated upon is being able to get the Maxim and ADI, R&D and applications and sales teams together to cover more application solutions for customers, to be able to cover more customers. And essentially make this company the go to place for the best analog engineers in the industry.

And in industry, by the way, all of our OEMs are struggling more and more and more, with their capacity to be able to manipulate and use analog technology. So we look about 10,000 people in the product development area and the product solution areas for our customers. And I think that will stand the company in good stead. So, in the years ahead, I believe this will be the most powerful analog franchise across the B2B sectors and in the chosen areas of consumer. And that's how I view it. Of course, there are some synergies that we will get in the short term and we'll move quickly to extract those synergies, where I would say there are natural inefficiencies across both enterprises.

Christina: Yep. And then, can you tell us, or just go over when the deal is expected to close and is that a little longer, I believe it's a little longer than the linear deal took the close. Is that because of COVID or other factors?

Vince Roche: Well, let me run down through the timeline here. The regulatory process is underway across the globe, and we have the shareholders of both companies will vote in the early part of October here. And we still maintain that the target timing that we put out there for regulatory approval across the world will enable us to put the companies together, we'll get the deal closed in the summer of 2021. But even with LT, LT took less than a year to get across the finish line, but we had assumed even there that we would have a one year time horizon to realistically get the deal done.

It could be sooner Chris than summer of 2021, might be a little later than 2021, but we've done a lot of analysis, a lot of in depth, I would say scrutiny of what the possibilities are across the globe. So I still feel comfortable with 2021 as being a very realistic date to close this deal.

Christina: Great. Yeah. On the approval front, a couple of things have changed since you guys successfully integrated linear. Number one, you're a much bigger power management company. And then number two, clearly, relationships on the US versus China are not exactly outstanding. Do you anticipate any issues either from the Syphius standpoint or from the [inaudible 00:21:51] standpoint?

Vince Roche: Well, we factored all that in, we've taken a lot of, I would say very, very reliable third party advice. That's been factored into our thinking, notwithstanding the tensions there between America and China. We still feel confident and comfortable with the data we've put out there.

Christina: Great. And then, now that this is your second go round, maybe share with us some feedback you've received from customers, now that the deals have been announced for awhile. And was it similar to the feedback post linear, a little different maybe compare and contrast?

Vince Roche: Yeah. Good question. I think generally speaking across the board, whether it's customers or investors, if you like the deal logic has been well understood, and customers I believe have really taken this deal to heart and believe that it will be good for Maxim good for ADI and as I said earlier, all of our customers are struggling with the analog technology area, and the skillsets these days, if I just go back and look at, what universities are teaching these days in terms of electrical engineering, there's a lot of focus on code development, a lot of focus on processing and digital technologies. And the analog craft, if you like, has been moving ever closer to the large analog companies.

There's a great asymmetry in place in terms of the skills that we can bring to the customer versus the customer's ability to, as I said earlier, to manipulate analog technology, I think that's been recognized and we got to bring, ADI has a very, very good reputation as a customer savvy and centric company. So, Maxim also has a very, very good reputation. I think generally speaking people see the cultural synergy and they see the value in terms of being able to bring the full force of our technologies and our solutions to bear. I think it's been very well received. And also, if I just think some of the areas investors have had some questions would be around, why did we acquire another large power franchise?

Well, it's actually quite complimentary. LTC was always focused on building the best power and analog building blocks, that were essentially highly flexible catalog oriented that could cover many, many thousands of applications and customers. Maxim has been a bit more targeted, I would say. There's been a bit more application specific and areas, like data center and cloud, like automotive, for example, with power. So I think we get a good mix of match between catalog and a bit more ASP orientation. Also with very, very, very high quality engineering on both sides.

Christina: Definitely. Hey, maybe, now that you've had a couple of years to dig into linear, maybe talk about what you've learned. Maybe it's just about power management in general, but what have you learned from the linear acquisition that you think is going to help you integrate Maxim? And then also, what have you learned that you think is going to be the biggest challenge in terms of integrating Maxim from the linear acquisition?

Vince Roche: Well, clearly when we acquired LT, we became somewhat bi-coastal as a company, a very, very heavy employee base on the East coast. And now, when we acquired LT very, very large employee base on the West coast, Maxim of course, adds a lot of heft to that. I'm excited actually about getting the pollination between the two companies out there. When we acquired LT, it was always very, very premier analog franchise. I think always speed is important.

Speed of integrating and getting a single company look and feel for our customers is very, very important.

I think we did that very well actually in the LT acquisition. That's also going to be very important on the Maxim side, integrating product roadmaps and getting our engineers focused on getting rid of overlaps and focusing on the unique things on both sides of the fence, getting the teams working together, getting the tool basis quickly, the design tool basis, the customer adoption tool base is getting those things integrated fast, I think is, and even faster is something that we will do in this case.

I think all these acquisitions, Chris, there's always something that is under scaled in terms of investment, in the case of LT we've had to capitalize, I would say backend and fabrication activities. So there will always be some surprises in terms of the capitalization of the business. Residual capitalization needed to equalize the standards on both sides, to some extent. So I think speed and going in with your eyes wide open around what the marginal investments required are in any of these deals to make them whole and make them work as you want.

Christina: Great. And then one of the questions I get is, the cost savings. How are you going to get to the, I think it's 275 million. Maybe give us an update on how the linear cost savings went? And what gives you confidence, you'll be able to achieve these costs savings at Maxim?

Vince Roche: Yeah, so clearly look, I think when you combine any enterprises, when you get more scale, you naturally get some opportunity for cost synergies. You just get more efficiency, you get more cost of goods, buying power, you get more buying car when it comes to buying the tool chains, for example, for product development software in general, for automation of your processes inside the company. When we announced LT, we said that our expectation was to get a minimum, \$150 million of synergies. I think at the time evenly split roughly between cost of goods, as well as OPEX, we will have gotten by the middle of the coming year calendar year, we'll have extracted about \$250 million out of both companies. And that's across the entire enterprise.

That was in a company, by the way, I will remind you that was when we acquired LT, it was billion and a half in revenue and 75, 76% gross margins, we've been able to improve the gross margins, a couple of 100 basis points. And also we talked on the earnings call about having about a half a billion dollars worth of lifetime or revenue, accretive revenue. And we're three and a half years in though at this point in time. So I think when we look at Maxim as well, I look at the cost synergies we can get, and I feel comfortable with 275 million as our target. And I think Tunch, and his team there have done a very, very good job over the last several years of making the company more efficient across the board.

But the number I've put out there I feel comfortable with, but I also think if LT is any indication in terms of revenue synergies, given the sheer scale of the

portfolio at Maxim, we have a great opportunity there as well to get that company consistently into kind of mid, single digit consistent growth rates. So I think you've got to look at both pieces to make sense of it.

Christina: Yeah. I think any way you look at the linear acquisition, that's been a spectacular grab. Are there any areas you mentioned that Maxim's a little more app specific and linear is a little more on the catalog side. Are there any areas now that you've had a few more months to look at it, dig into it, of product overlap between linear and Maxim, or are there any parts of Maxim that you're, maybe a little bit less enamored of than the other parts of the business?

Vince Roche: Yeah, we've obviously done our due diligence over a fairly long period of time. So, no, I feel very comfortable with the portfolio. As I said, there is very, very, very little overlap between any of the franchises inside ADI and Maxim. So, I think we were all trying to spend our R&D very carefully and make sure that we were creating categories and creating unique products. So that's always been the ethos on both sides of the fence. So the overlaps are very, very small. We got a lot of questions about the overlap in the battery management area. But clearly ADI has moved onto a very, very different track. We've changed our game with this wireless battery management technology. It's a whole unique category. And there's also a competition in that space.

It's still a young market and the competition will arise, but I think over all Chris, and by the way, none of the products are plug and play, that is something that is unique in the analog industry. It's such a nuanced design problem to solve in the analog space that even pin for pin compatible parts, rarely work exactly as specified across two competitors sockets. So, you're looking at a high level of uniqueness and very, very little overlap. Clearly the categories that we provide mixed signal power on paper look similar, but in terms of the implementation of the products and the categories quite different.

Christina: Yeah. Last I checked GM is a pretty good customer on the battery management solutions side. One question that I'm curious about, I do get from investors is why did you guys go with an all stock deal instead of cash on the Maxim acquisition?

Vince Roche: Yeah. If I can just unpack that for you. We're in the middle of a pandemic, and when you look at how both companies shares have traded over the last several years, if you take a three year time period say, the indexing between the stocks was very, very, very similar. It was very steady, very similar in terms of exchange ratios. So that made it palatable to both boards that when the area stock moved, the maximum stock tended to move and vice versa, whether it was up or down. So that very consistent indexing wasn't important consideration in putting the stock together, but also it gave us a natural hedge.

We weren't inclined to take a lot of debt out during a period of tremendous economic uncertainty and what I'll remind people as well as when we get to closing the deal, the debt to EBITDA is going to be done around unity. We will

have a great capacity to create leverage on the balance sheet, if we so desire to do any number of things, whether it's stock buy backs, whether it's further dividend payments, whatever it is. So I think that's an important consideration that we have a lot more flexibility at the time of deal closing in terms of leveraging our balance sheet. And I will also remind you, Chris, we'll be generating somewhere in the region of, 2.7 to \$3 billion worth of free cashflow. I think all those things are in the mix of consideration for why we did a stock deal at this particular point in time.

Christina: Then you get four more quarters of Maxim cash flow too. Switching gears to another topic is China and Huawei, if you could just remind us, how big of a customer Huawei is to ADI? And what that impact is both this quarter and next quarter with the ban going into effect?

Vince Roche: Yeah. Huawei is a low single digit customer for the company. And we have factored in, so in our outlook, we factored in the effects of the latest ban. I believe that the business will continue to decline, I think for ADI and for many of our competitors there. As I say, Chris that's factored in, so there's not much more to say about it, really.

Christina: Sure. I guess there's a little bit less of this quarter. And then, next quarter, that should be the last quarter of any sort of impact there, I guess, was the gist of my question.

Vince Roche: Perhaps, unless there's a change of thinking within the administration, there's still, I think a little uncertainty as to how all this will play out, but yes, I think what you've said is what we're assuming.

Christina: Yeah. You see, you guys have a really good China business. Do you think that it's possible that anybody else gets thrown on the no ship list and is ADI doing anything to insulate itself, or can you do anything to insulate yourself from further tensions here?

Vince Roche: Well, ADI has for many, many years, for two and a half decades, we've built up a very, very good brand and reputation in China. So my sense is, very, very hard to know. I'm more optimistic by the way about the position in terms of China as a whole. My sense is we will be doing business there in decades to come. We have a very, very diverse business. It's a business based on many, many hundreds of applications, thousands of product skews, thousands of customers, and across the industrial sector is very, very big for ADI, for example. So my sense is, we'll be doing business there, as I said in years to come and we will do our best to serve and support our customers there.

We'll be doing business over the longterm, as long as our innovation is very, very strong. We keep our focus on innovation, serving our customers well. And I'm actually quite optimistic that what I've laid out there for you is the path that will be followed in the near term as well as the longer term.

Christina: Yeah. Do you see any shifts in your business away from China to other regions or even within China to certain customers or as it really impacted it?

Vince Roche: I think what's really important to the answer to that is no, I haven't Chris, I haven't seen any shifts. The ability to replace or capacity to replace companies like ADI is very, very, very challenged because the things we do are unique, as I said, we have many thousands of products and hundreds and hundreds of applications. And the replacement of this high performance analog technology is, is a very, very difficult task. So I don't see anything certainly the near term in terms of being able to replace the things that we've got there.

Christina: How about from a customer base perspective? Have you seen a bit of a shift in the customer base at all, or is that not hitting you as well besides the obvious Huawei?

Vince Roche: No, again, I think when customers want the highest performance technology in the analog space, they come to ADI, that's the reputation we have and our design activities are still brisk in the region. And our customer engagements are very, very solid. So, no, I haven't seen any shifts.

Christina: Sure. Another topic that has been popping up a lot, really over the last month or two is the possibility for the US government to subsidize the semiconductor industry, either company, subsidies, or manufacturing or something else. Do you think that's possible? What would be the impacts is that good, bad, neither for ADI? Would you welcome it? Not welcome it? What would be your thoughts there?

Vince Roche: Yeah, I think it's certainly in the realm of possibility. I know that there are a lot of proposals up for discussion across the, at the, at the Congress there. I think it's very possible, Chris, particularly in the area of... when you think about semis, semis have become in many ways, a large part of the identity of what it means to be a suffered nation. When you think about the importance of semis as foundational technologies for the modern economy, modern society, modern healthcare. So my sense is whatever it is perceived in terms of what it takes to get a government and private enterprise collaboration to make US secure and self-sufficient from a semi supply standpoint, my sense is investments will be made here.

And just a fraction of the supply, if you like from US, some electric companies across the subject or market, a fraction comes from US sources. That'll probably get rebalanced over the coming years. It won't happen overnight, but it will happen I believe over the next several years.

Christina: Then on that, so the geopolitical tangent. Maybe talk about the trends in your business so far this year from a geographical standpoint, and what you see going forward, is China pretty much back to where it was before? Is Europe still

have some what to shop? Is the US on its road to recovery? Maybe give us your take on your GOs have trended so far this year.

Vince Roche: Yeah. Well, you've done a good job there, Chris outlining really what has happened. So I would say China-

Christina: [inaudible 00:42:12]

Vince Roche: I can't even see you, Chris.

Christina: That's why I'm on speakerphone.

Vince Roche: I think China has rebounded fastest. China was able to emerge from the pandemic faster than anybody else. So the economy there has been rolling at quite a fast clip. So China has been strong. America has been increasing in strength as well over the last several months. And then I'd say Japan in different areas, car industry there is beginning to recover. The instrumentation industry there has been very, very solid, less so in terms of factory and process automation. And Europe has been in the deepest slumber.

But again, there are signs that Europe is beginning to emerge. And as you know, the automotive industry is really important in Europe and that industry was shuttered for several months. But I think that's the pattern we're going to see at least for the next couple of quarters in terms of, if you like the reawakening of those economies. I think it will be in that kind of order.

Christina: Great. Thanks again, Vince. I think we're unfortunately out of time. I really appreciate you taking the time to come on and I hope you and your family are healthy, safe, and happy in this environment. And when all this is over, we can meet in person.

Vince Roche: Look forward to it. Thanks Chris for having us.

Christina: Thanks, again. Take care.

Vince Roche: Cheerio. Bye-bye.