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PRESENTATION

Operator

Good day, ladies and gentlemen, and welcome to the Amkor Technology's Second Quarter 2020 Earnings Conference Call. My name is Gigi, and I will be your conference facilitator today. (Operator Instructions) As a reminder, this conference is being recorded.

I would now like to turn the call over to Vincent Keenan, Vice President, Investor Relations. Mr. Keenan, please go ahead.

Vincent Keenan - *Amkor Technology, Inc. - VP of IR*

Thank you. Good afternoon, everyone, and thank you for joining us for Amkor's Second Quarter 2020 Earnings Conference Call. Joining me today are Giel Rutten, our Chief Executive Officer; and Megan Faust, our Chief Financial Officer.

Our earnings press release was filed with the SEC this afternoon and is available on our website. During this conference call, we will use non-GAAP financial measures, and you can find the reconciliation to the U.S. GAAP equivalent on our website. We will also make forward-looking statements about our expectations for Amkor's future performance-based on the environment as we currently see it. Of course, actual results could be different. Please refer to our press release and other SEC filings for information on risk factors, uncertainties and exceptions that could cause actual results to differ materially from these expectations.

Please note that the financial results discussed today are preliminary and final data will be included in our Form 10-Q.

And now I would like to turn the call over to Giel.

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Thanks, Vince. Good afternoon, everyone. I'm pleased to be with you on my first call as President and CEO of Amkor. On today's call, I plan to share some of my background with you and will discuss the important markets and products where I believe Amkor is well positioned for growth. I will also cover our second quarter results and expectations for the third quarter.

I joined Amkor in 2014 and was the leader of our advanced products business for more than 5 years. During that time, the advanced products business grew by close to 50% on the strength of wafer-level, flip chip and advanced SiP technology for communications, computing, and consumer end markets. I worked closely with the lead customers to introduce and ramp these technologies and manufacturing solutions.

Prior to joining Amkor, I served in a variety of senior management position with companies in the semiconductor and the electronics industry throughout Europe, Asia and the U.S., including NXP and Philips. Over the past months, I spent a lot of time with customers and suppliers as well as with our factories' sales and business teams. Their feedback only reinforces my view that Amkor has the combination of key technologies, a highly skilled manufacturing base and deep customer relations necessary to expand and strengthen our leadership position as a trusted partner in the semiconductor supply chain.

Going forward, I see significant growth opportunities for Amkor in emerging growth segments like 5G communication, high-performance computing, IoT wearables and automotive electronics. These markets will continue to drive innovation in technology and manufacturing expertise in the OSAT domain. The breadth and diversity of Amkor's technology portfolio manufacturing scale and footprint, together with its broad customer base and support structure, positions the company very well to serve our customers in these high-growth areas.

Before we move to our recent results, I would like to update you on our progress responding to the coronavirus. Across our factory network, we continue to keep measures in place to contain the impact of COVID-19. We were able to avoid significant disruptions in our factories, and our purchasing team has been able to mitigate supply chain impact on components and materials supply. Our robust IT infrastructure has allowed employees to transition to work-from-home environment while maintaining high levels of customer service.

Now let's turn to the second quarter results. Continued strong demand in the communications and consumer end markets resulted in another quarterly revenue record. Revenue increased 31% year-over-year. Broad-based amount drove both revenue and profitability above the high end of expectations. When combined with the strong first quarter results, we generated nearly \$0.50 of EPS in the first half of 2020 while strengthening our balance sheet.

Communications experienced better-than-expected revenue across all ecosystems and major customers. Although we expect overall smartphone units to decline in 2020. In the first half, we experienced growth in our 4G products as well as a steady ramp of 5G products including RF front-ends, modems, sensors and AiPs. Computing, which grew 13%, both sequentially and year-over-year also exceeded expectation in all applications, including data center, infrastructure, storage and PC laptops.

Our memory business has shown steady growth with over 15% sequentially and over 35% year-over-year in the second quarter. NAND Flash memory business remains a growing portion of our portfolio and we are well positioned to capture growth in both the communication and the computing markets.

Consumer wearables continued the fourth quarter trend of both sequential and year-over-year growth. Customers increasingly choose Amkor's advanced SiP technology. Combined, with our strong engineering support and high-volume manufacturing, it delivers industry-leading quality and yields.

Finally, our test business grew 5% sequentially and 25% year-over-year as we continue a multi-quarter trend of increasing test attach rates. The strong first half revenue performance was driven by our advanced product portfolio. This resulted in a higher level of utilization of our flip chip and wafer-level production lines as compared to the first half of 2019 during the inventory correction.

Advanced SiP, where we have been adding capacity for the past 4 quarters, had some of the highest utilization rates in the company driven by new RF, AiP and wearable products. The one area where our utilization rates declined this quarter is in our leadframe and wirebond lines. The recent weakness in automotive has reduced utilization in these factories. Over 40% of our leadframe and wirebond business is tied to the automotive and industrial end markets.

Our factory team did an excellent job to secure supply to our customers under current difficult conditions. Also, the quality performance across factories in the second quarter of 2020 was at its best level for the last 3 years, resulting in several positive endorsements from our customers. While the semiconductor supply chain has responded very well to the coronavirus challenges, we are still dealing with an environment of dynamic forecast changes as customers try to balance limited visibility with inventory levels in their supply chain.

With a robust product pipeline, we expect to maintain our CapEx budget at \$550 million this year with investments, focus on capacity and capabilities and quality improvements. Major investments include advanced SiP and test capacity and capability as well as quality enhancement through automation.

Turning to our third quarter outlook. While there is macroeconomics uncertainty related to the pandemic, we are expecting Q3 revenue to grow 6.5% sequentially and 15% year-over-year at the midpoint of the guidance. The launch of flagship smartphones, including more 5G models, where we have a strong footprint, is expected to drive this growth along with consumer wearables. Automotive business is expected to show continued weakness with further revenue declines in the automotive supply chain, particularly in Japan.

Automotive customers tell us that Q3 will be likely the trough quarter, with slow recovery in Q4 and the first half of 2021.

In closing, we have a strong position in the key growth areas for semiconductor packaging and test services. And I'm confident in Amkor's future and our long-term prospects for revenue growth and sustained profitability and positive cash flows.

Megan will now provide more detailed financial information.

Megan Faust - Amkor Technology, Inc. - Executive VP & CFO

Thank you, Giel, and good afternoon, everyone. Today, I will review our second quarter results and then provide some comments on our third quarter outlook. We delivered a third consecutive quarterly revenue record as revenue rose 2% sequentially and 31% year-over-year to \$1.17 billion. Through the first 6 months of 2020, revenue is up 30% from 2019, and operating income margin increased 530 basis points to 7.3%. The increase in revenue is primarily due to continued strong demand for advanced packaging products supporting the communications and consumer markets. Q2 gross margin of 16.4% was flat with the first quarter and expanded 260 basis points from the prior year quarter. Gross margin was dampened by the ongoing shift in product mix to higher bill of materials packages like advanced SiP, and low utilization of certain mainstream production lines as a result of weakness in the automotive market. Operating expenses were flat sequentially and also flat year-over-year after adjusting for the \$3 million gain in Q2 '19 for the sale of real estate. Our strong revenue performance and disciplined spending drove operating income margin to 7.4% for the quarter.

Net income for the quarter was \$55 million and earnings per share was \$0.23. EBITDA increased over 40% from the year ago quarter to \$209 million, and EBITDA margin was 17.9%. Our focus on free cash flow has resulted in more consistent cash generation. We delivered free cash flow for 5 consecutive years through 2019. With our strong performance in the first half of 2020 and expected growth in Q3, we are well positioned to deliver a sixth year of positive free cash flow. This financial flexibility has allowed us to delever over the last 5 years.

We ended the quarter with \$1.4 billion of total liquidity, which consisted of \$1.1 billion of cash and short-term investments and \$300 million of availability under our debt facility. Since 2015, we have reduced net debt by \$610 million. And net debt now stands at \$450 million, the lowest in the company's history.

Moving to the outlook. As a reminder, we widened our guidance range for the second quarter, given the level of uncertainty related to the overall macroeconomic environment. And we are maintaining the wider range for the third quarter outlook. We expect revenue to be between \$1.2 billion and \$1.3 billion. Gross margin is expected to be between 15% and 18%. This reflects the expected shift in product mix to higher bill of materials packages for advanced SiP products, supporting communications and consumer markets. We expect Q3 operating expenses of around \$110 million, which includes approximately \$10 million for restructuring costs in Japan.

Our Japan restructuring initiative includes a streamlining of operations and the closure of 1 factory. We expect to substantially complete these activities by the end of this year. This restructuring will have a quick payback and is expected to reduce fixed costs by approximately \$25 million, half of which we expect to benefit from in 2020. We expect our annual effective tax rate to be around 20%. We expect net income to be in the range of \$42 million to \$85 million and earnings per share to be in the range of \$0.17 to \$0.35.

Our 2020 forecast for capital expenditures remains at \$550 million. As Giel stated earlier, we believe that the mid- and long-term growth drivers for the semiconductor industry remain intact. The combination of a broad technology portfolio, a global manufacturing footprint and a trusted customer base, together with a strong balance sheet form a solid foundation for profitable growth in 2020 and beyond.

With that, we will now open the call up for your questions. Operator?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions)

Our first question comes from the line of Sidney Ho from Deutsche Bank.

Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

And congrats on the good quarter and guide. Maybe first question is for Giel. Congrats on the new role, first. Giel, what -- maybe what are your business priorities and maybe the changes that you would like to implement over the next 6 to 12 months? And are there certain financial metrics that we can track the progress you guys are making? That's my first question.

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

I certainly -- thanks. This is Giel, and I appreciate your congrats. I mean on the priorities for the year -- I'm not new to Amkor. I'm with the company for over 6 years. So I'm pretty much familiar with the advanced products business. And we will continue our focus on that product segment of the company. So from a priority perspective, I think growth in advanced SiP is a priority in the markets that we just mentioned, across communication, 5G, high-performance computing, IoT wearables. And we, of course, look very carefully at the automotive first -- segments, also. So from a market approach and from a product segment approach, I don't intend to make significant changes. From an organization point of view, I think we have all the key ingredients in place when it comes to technology development and manufacturing skills. So I don't expect any firm stages there.

I think Megan already showed the priorities on the financial side. I mean we have a solid cash base. We will focus and continue to focus on cash generation for the company. And also there, I don't expect significant changes in the priority. So overall, it is a continuation of what we have. From a style perspective, maybe we focus more on acceleration of some, let's say, decision-making across the company, but that's more of a cultural change inside the company.

Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

That's great. Very helpful. My follow-up question is, I think the last quarter, the team talked about getting indications from a number of customers that near-term demand is expected to weaken because of the coronavirus. It looks like things were better than you expected in May and June. So 1 month into the third quarter, are you sensing similar cautiousness from your customers? I think last time you guys were talking about auto, communications and industrial. I just want to get an update there.

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Well, let's start with the auto business. I mean I spent quite a bit of time with players in the automotive supply chain. And where last quarter, we expected some recovery towards the end of the year. We -- our current view -- or my current view is currently, the debt recovery will take longer than expected. So our current view is a trough quarter in Q3, but with a very slow recovery in Q4 and the later part of 2021.



When it comes to the mobile market, we clearly see that the basic assumptions that we had for our Q2 forecast [are still] in place. We expect a strong, let's say, launch of premium smartphones in the second half of the year. So we're pretty optimistic. And on the mobile market, of course, also our Q2 performance, if we look to our overperformance in the -- let's say, in the second quarter, about 60% was in the mobile market. And the mobile market, the 60% rebound or improved performance was very much driven by 2 ingredients. One is a quick rebound of the China markets, and a successful launch of some smartphones in Q2. And we continue to have a very confident view also going forward in Q3 when it comes to the ramp of new phones. But also the overall sell-through in the key markets for mobile.

Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

That's great. Maybe I can squeeze in one more and I'll go away. If just looking at the comms that Giel you just mentioned. If I look at the past few years, third quarter for your comms business generally up somewhere around 25%, 30%. Should we expect a similar increase this year? And may as well ask, the following quarter, if you have enough visibility right now. If you look at the second half versus first half, it was up -- again, going back a few years, up between 20% to 45%, which end of the spectrum do you expect that to be for this year?

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Well, last year, of course, the dynamics in the comms market was different than we expected to see this year. Last year, we had a significant inventory correction in the first half of the year, which we currently don't see. So if you look to, let's say, quarter-on-quarter performance in Q3, we still see an improvement, but probably not as high as we have seen last year. Megan can give you a little bit more detail on the percentages.

So first half, second half, high level of confidence. Definitely, if you look to the overall comms market, we see that the unit number of smartphones is declining. We are expecting high single digits, low teens decline. But the 5G models are still expected to ramp, certainly, in the second half according to plan. I would expect, let's say, high double digits. So let's say, between 175 million to 225 million 5G phones in the second -- mainly in the second half of the year. So there, our footprint is strong. On the other hand, there's still some uncertainty in the market. And so although we're well positioned. I think we're a bit conservative with respect to the revenue in the second half of the year.

Megan Faust - *Amkor Technology, Inc. - Executive VP & CFO*

Sidney, I can echo Giel comments that as far as what we're expecting in the second half for comms, it is your typical seasonal second half launch. Sometimes, the strength of that between Q3 and Q4 is dependent on the timing of that launch. But as far as the strength, we would say that's a typical strength for comms. Giel is correct. Q3 '19 had an unusually significant sequential increase given the inventory correction that we felt in the first half of '19. So looking further back in '18 is where you would see more typical strength.

Operator

Our next question comes from the line of Randy Abrams from Crédit Suisse.

Randy Abrams - *Crédit Suisse AG, Research Division - MD and Head of Taiwan Research in the Equity Research Department*

And I also want to congratulate Giel on the new role as CEO. The first question, since it's top of mind with Intel. They are discussing a bit more of an outsourcing as a contingency or potential on the foundry side. I'm curious -- opportunity on package and test. Traditionally, they have a pretty big in-house. But if there's any discussion along with foundry of any shift in potential opportunity -- to capture more opportunity there?

Giel Rutten - Amkor Technology, Inc. - President, CEO & Director

Thanks, Randy. Yes, that's a good question. I mean, with respect to the Intel supply chain. I cannot comment in full detail. Of course, Intel had a very much vertically integrated supply chain, certainly in their, let's say, 10-nanometer compute segment. Bringing that for future technologies into, let's say, a foundry supply chain or at least partly. We didn't look into full details, which opportunities that could bring. I mean TSMC is a long-term partner for Amkor, where we have in multiple business segments -- business either in a model where we work as, let's say, as a second source or a model where on specific technology platforms, we bring incremental innovation or capabilities. So we expect that to continue. So if anything, I would say, from the current situation, where it's completely vertically integrated to the future situation where it would be foundry-based. There is definitely some positive upside to be expected.

Randy Abrams - Cr dit Suisse AG, Research Division - MD and Head of Taiwan Research in the Equity Research Department

Okay. Great. No. I appreciate that. And then I wanted to ask, the other piece, which has been a good growth driver, the advanced SiP. If there's a way to think kind of current year run rate, how that business is tracking. And if you could discuss pipeline of opportunities in different segments? How you think about growth continuing there? And there's also been from the passthrough, the margin impact. So if there's a way to think maybe the -- how much dilution to margin is coming from that business? And if that might just stay there just given the different nature of that business.

Giel Rutten - Amkor Technology, Inc. - President, CEO & Director

Okay. Thanks, Randy. Let me try to capture that first part of the -- of your question and then Megan can give a little bit more detail on the margin impact. I mean talking about product pipeline within Amkor, we started engaging with our SiP technology platform about 4 to 5 years ago. In first -- in different ways, in the industry from RF front-end solutions. That's still continuing into automotive. Now definitely, the wearable category is another part of the market that is showing significant growth. Now if we look to our product pipeline, I think we have strength across all these segments. We have strength on the RF part where going into 5G, a lot of the incremental value -- or incremental value, yes, for the semiconductor part is in the RF part of the phone. I think we're well positioned there. We have a strong, let's say, platform solution for RF. If we look to automotive, a similar thing. I think we have digital applications in automotive from digital displays, infotainment, even sensors like gesture sensors, facial recognition sensors that's going into automotive. So I would say we're well positioned there. We're proliferating our technology there. And if you look to IoT wearables or consumer wearables, if you want, also there, we have good engagements certainly into inter wearable audio space, where we work with multiple customers, and we have confirmation, of course, also on future product pipelines, and that shows strength. But beyond, let's say, the audio products, we also see, let's say, strong demand in other wearable solutions like, let's say, health trackers, smart watches, et cetera, because there's a certain common denominator in all these products is that they want to push more electronic functionality in an ever smaller space. And that functionality goes, let's say, across these product ranges from wireless connectivity, sensor technology, more compute performance. And there, I think we can offer, and we put in place over the last couple of years, a very strong platform that can do that integration. I mean it's -- you may call it -- if you call it one hand, you have, of course, digital integration. On this hand, you talk about heterogeneous integration of functionality. I think that's -- we currently, let's say, proposed to multiple customers in these segments.

Megan, can you talk a little bit more on the margin impact?

Megan Faust - Amkor Technology, Inc. - Executive VP & CFO

Sure. So Randy, as Giel has outlined, I mean, advanced SiP has been one of our most significant growing markets. It's more than doubled from a year ago quarter, and it's about 1/3 of our business here in Q2. So this is really the main driver for our 3 consecutive record revenue quarters. So even at 45% materials in Q2, we had really good operating margin and cash flow. Q4, again, \$0.40 EPS. And so that brings us to the first half of 2020 at \$0.49. So this demonstrates that although this growing market with the high material content is dilutive to the gross margin percentage, it's definitely accretive to earnings. And I think one of the key benefits is the fact that advanced SiP is capital-efficient compared to some of our other technologies. And so that capital is fungible, and that really helps drive effective utilization. And that's where we can really ultimately generate good cash flow.



Randy Abrams - *Crédit Suisse AG, Research Division - MD and Head of Taiwan Research in the Equity Research Department*

Okay. Great. And last question I wanted to ask just relative to a few months ago where the outlook has picked up. Could you discuss maybe how much you're seeing it, customers seeing demand picking up or better than feared versus desire to carry more inventory. And then implications, like where do you think inventory levels are now. And the second part is also on a bigger picture, how you see fourth quarter? Like traditionally, it can be a growth quarter if things are on the right track, but I'm curious for this year balancing everything out. How it looks?

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Yes. Randy, let me start to try to give a little bit more color on the inventory situation. Again, the inventory situation, in our view, is different across markets. On the communication markets, generally, in this part of the year, we see some prebills to prepare for the second half ramp. And we continue to see that. Although also there, I think that depends very much, let's say, on the policy and strategy of certain companies. Some do a strong prebuild and take some inventory, others do less of a prebuild. This year versus normal years, I would say, I see a little bit more inventory building up in this quarter. There was also some material shortages that was caused, specifically on the substrate side where companies were pulling in, let's say, these components to prepare for inventory builds. I would say not significant. Difficult to judge how much it will be comparable to other years, maybe a little bit on the high side. On the automotive side, however, we saw, I would say, significant inventory build in the second quarter. The reason for that was very much the very good 2019 year in the automotive market, where they ended with an exit philosophy that was very good. Certainly, internal factories of the IDMs were running at very high utilization level at the end of 2019. And that inventory was pushed into the market in Q1, Q2. And that will -- resulted in significant inventories in this quarter. We saw that, of course, factory utilization is down. I mean I talked to some of the, let's say, players in the Japanese supply chain. I think they run their factory, some cases at 20% to 25% utilization. So there are corrections going on already. But before that inventory is bled. That will take some time.

The other markets, I would say, are pretty much in balance. If we look to IoT wearables, end market is strong. Limited inventory. If you look to the share -- high-performance computing markets. Also, there limited inventories, different than other years. Memory markets. We're not playing in the DRAM market. But on the NAND Flash market, we see now that there is no inventory, strong sell-through into the communications segment as well as the data center segment.

Randy Abrams - *Crédit Suisse AG, Research Division - MD and Head of Taiwan Research in the Equity Research Department*

Okay. Great. And maybe finally, the second part of the question was just impact on the, I guess, the normal at this stage fourth quarter, how you see it if it could still be a growth quarter, knowing it could change within a few months, but just a directional outlook at this stage, if you have that?

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Yes. Let me ask Megan to comment on the fourth quarter. Megan?

Megan Faust - *Amkor Technology, Inc. - Executive VP & CFO*

Yes. So Randy, we typically don't guide the fourth quarter. Also some of the direction, I mean, our historical, we can be down slightly in Q4, if you look at a 10-year historical average. But it's really a function of the timing and the success of the premium film launches that's going to depend on how Q3 and Q4 perform.

Operator

Our next question comes from the line of Krish Sankar from Cowen and Company.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

And Giel, congrats on the new role. I have a couple of questions. First one, recently, there was some press release saying that Foxconn is looking at doing a packaging fab in China. Kind of curious, from advantage point, does that increase the competition for you folks? And do you see that as an emerging team with -- given the EMS folks getting into advanced packaging?

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Well, Krish, that's a good question. Now we see supply chains in the semiconductor industry and certainly because of the geopolitical changes currently very much regionalized. So Foxconn investing in China facility is very much to support a local China supply chain. That's how I see it. Foxconn has, I would say, limited exposure to this part of the business. But I would say they anticipate a faster growth of the China semiconductor industry and they anticipate that them bringing advanced package technologies would be a good growth opportunity.

From an Amkor perspective, we don't see this immediate -- immediately as significant competition. Our factory in China caters to both local as well as international clients. We have a full portfolio of package technology there. And for the foreseeable future, I will still expect that to continue, certainly with the continued growth in the local China supply chain.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it. Got it. That's very helpful, Giel. And then 2 other quick questions. One is, if I look at your auto exposure, I understand now you're going through a cyclical downturn. It should improve materials. But over the last 3 years, your auto has been roughly a 1/4 of your sales. So roughly 25%, give or take. Do you see the trend increasing into the future? I understand as more auto -- like semi content in auto, but what do you think is going to drive the incremental upside, given the fact that it's kind of been roughly flat over the last 3 years?

Giel Rutten - *Amkor Technology, Inc. - President, CEO & Director*

Yes. I mean current -- and Megan needs to correct me when I'm in doubt. I mean currently with the auto business is about 29% of our revenue in the second quarter. Now your question is also very much, does it grow faster than other segments that we are catering for? I'm very optimistic with respect to the automotive business. It plays very well to Amkor's strength. We have built and invested in a trusted automotive supply chain for the last couple of years. It's typical, a play of tier 1 OSATs. It requires a deep customer intimacy to be able to qualify your supply chain. So we're very optimistic from our opportunity, but also for the increased electronic content in the car. I mean moving to more electrification in cars, but also more digital electronic content in the car will help to drive that volume.

Now I would say the current percentages that you read from is about, let's say, high single-digit growth per year. And we see that, that will -- it's realistic. This is a sort of extraordinary year. I mean, content is coming from driver assistance functionality, digital displays, infotainment, a lot of sensors. I mean we even now have projects with customers on radar gesture sensors in a car. Facial recognition. All of these things drive increased electronic content in the car. And I would say we're just at the beginning of that growth curve. Maybe the total volume of cars -- I mean last year, in 2019, it was 90 million cars. This year is expected to be roughly 20% less. It's not really increasing, but definitely, the electronic content will continue to increase. And we are actually happy with the position that we're having there. We will continue to invest in the technology and manufacturing portfolio.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it. Got it. That's very helpful, Giel. And then a final housekeeping one for Megan. The \$550 million in CapEx, I remember it's kind of been the same since you initially said it in January, is the breakout the same, i.e. 60% goes to advanced packaging and maybe 10% to wirebonders?

Megan Faust - Amkor Technology, Inc. - Executive VP & CFO

Yes. The breakout of that has stayed the same. There's about 70% for equipment capability, 30% for infrastructure, which includes R&D, quality, facilities built out. And the split of the equipment is the same where that's mostly advanced packaging, 60%. And then 10% for wirebond.

Operator

Our next question comes from the line of Atif Malik from Citi.

Atif Malik - Citigroup Inc., Research Division - VP and Semiconductor Capital Equipment & Specialty Semiconductor Analyst

I have one for Giel and one for Megan. Giel, what changes or areas of improvement you envision at Amkor as you take over from Steve?

Giel Rutten - Amkor Technology, Inc. - President, CEO & Director

Well, Atif, that's a good question. I mean if we go forward and look at the routes, but also the position in the supply chain where Amkor is, we're a manufacturing service company. So we definitely will continue to focus on -- probably a little bit more focused than in the past on our manufacturing base. Core value drivers are definitely quality -- manufacturing quality, in-time delivery, but also flexibility and customer intimacy. It's in place, but it always can improve.

Then when it comes to technology, I would say also there, we clearly need to focus on working together with lead customers in emerging markets to build value-added solutions. Doing that on your own internally, doesn't create an immediate value. You need to do that in close cooperation with other -- with customers or with other supply chain partners. So that's across the supply chain. Cooperation is very important for me. And I would say that is a priority. I mean, financial performance, I think we are doing that. I mean drove some incremental, let's say, technology corporations and some smaller acquisitions. We will continue to look for that, but there are no immediate plans to pick that up.

Atif Malik - Citigroup Inc., Research Division - VP and Semiconductor Capital Equipment & Specialty Semiconductor Analyst

Great. And Megan, you talked about gross margins being a headwind on dilutive because of the increasing mix of advanced packaging. What is your long-term model on gross margins? And does the mix change that? And can you talk about it, what point the capacity that's fungible and advanced packages become more of a tailwind for gross margin?

Megan Faust - Amkor Technology, Inc. - Executive VP & CFO

Sure. So just to recap as far as the increasing advanced SiP, which has somewhat diluted margin, there's also the function of some underutilized lines that are causing some bit of the dampness there as well. For example, the auto revenue being down from Q1 to Q2 of more than \$30 million. That can have an 80% -- 80 basis point impact to gross margin percentage. So as it looks to the future and what the long-term model is, we can't speculate per se on what that material percentage would look like. Our goal is to grow all of our technology solutions. But as we increase our test business, which has a significantly lower material content as well as the recovery of auto and mainstream. Those will not only impact the material content but it will increase utilization. And so that will also be a lift to gross margin.

Operator

At this time, I'm showing no further questions. I would like to turn the call back over to Vincent Keenan for closing remarks.



Vincent Keenan - Amkor Technology, Inc. - VP of IR

Thank you, Gigi. This ends the question-and-answer portion of our call. I will now turn the call back to Giel for his closing remarks.

Giel Rutten - Amkor Technology, Inc. - President, CEO & Director

Thanks, Vince. Before closing the call, I would like to recap our key messages. We delivered the third consecutive quarter of record revenue and solid improvement of year-on-year profitability. Our coronavirus mitigation efforts have allowed us to keep our factories running while further improving quality and maintaining a high level of customer service and support.

We also [believe]the medium and long-term growth drivers for the semiconductor industry remain intact, and Amkor is well positioned for continued growth. We further strengthened our balance sheet, and we are well positioned to invest in Amkor's future as a trusted partner in the semiconductor supply chain.

And last but not least, I would like to thank the whole Amkor team for delivering this great quarter and for their resilience and diligence in these unprecedented times. Thank you for joining the call today.

Operator

Ladies and gentlemen, this concludes today's conference call. You may now disconnect.

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