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ADI - Q4 2015 Analog Devices Inc Earnings Call

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OVERVIEW:

Co. reported 4Q15 revenues of $979m and diluted EPS of $1.03. Expects 1Q16 revenue to be $805-855m and diluted EPS excluding special items to be $0.65-0.73.

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PRESENTATION

Operator

Good morning. My name is Jennifer, and I'll be your conference facilitator. At this time, I would like to welcome everyone to Analog Devices' fourth-quarter and FY15 earnings conference call.

(Operator Instructions)

I would now like to turn the conference over to your host for today, Mr. Ali Husain, Treasurer and Director of Investor Relations.

Please proceed.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Great, thanks, Jennifer and it feels good to say good morning, everyone. Thank you for joining ADI's fourth-quarter and FY15 earnings conference call. You can find our press release and the relating financial schedules on our Investor page at investor.analog.com.

As usual, this morning I'm joined by ADI's CEO, Vincent Roche, and ADI's CFO, Dave Zinsner. The agenda for this morning as is follows. First, we'll provide a brief overview of our fourth quarter and FY15 results. And then we'll provide our current thinking and our outlook for the first quarter of 2016. And finally, Vince will capstone the prepared remarks, following which we will open up the lines for Q&A.

So before we start, let's get through the important disclosures that we have to make every quarter. Please note the information we're about to discuss, including our objectives and outlook, includes forward-looking statements. Actual results may differ materially from these forward-looking statements as a result of various factors, including those discussed in our earnings release and our most recent 10-K. These forward-looking statements reflect our opinion as of the date of this call and we undertake no obligation to update these forward-looking statements in light of new information or future events. Our comments today will also include non-GAAP financial measures, which we have reconciled to their most directly comparable GAAP financial measures in today's earnings release, which we have posted on our IR page at investor.analog.com.

So let's get started. As you've likely seen from the press release, ADI had another very strong quarter. Revenue in the fourth quarter totaled $979 million, increasing 13% sequentially and 20% year over year. These results were above the high end of our guidance range, primarily due to strength in portable consumer devises and, to a lesser extent, from some recovery in the wireless communications infrastructure market.

For our just completed FY15, revenue totaled $3.4 billion, with industrial applications representing the largest portion at $1.5 billion or 44% of sales. The balance of revenue for the year was about evenly distributed across consumer, communications, and automotive applications.

During the fourth quarter, continued strength in consumer portable devices resulted in $317 million of consumer revenue, which was a sequential increase of 53%. Here, our precision technology platforms are being leveraged to deliver highly innovative user experiences, and are driving very strong ROI for ADI's R&D investments.

Revenue from communications infrastructure customers represented 16% of revenue, and increased 12% sequentially in the fourth quarter, which was ahead of expectations. Wireline applications decreased sequentially, while the combination of inventory replenishment and improving wireless CapEx spend drove our strong wireless infrastructure's sequential revenue performance as customers continued to deploy our highly innovative microwave and RF solutions.

Despite this near-term rebound, wireless base station deployments are well below prior peaks. And I'd say the same is true for ADI's wireless infrastructure sales.

During the fourth quarter, our broad and highly-diversified industrial end market decreased 4% sequentially, which was in line with seasonal patterns. All of the industrial subsegments within the industrial business declined sequentially, with the exception of aerospace and defense, which was stable to the prior quarter.

As you know, the industrial market is our most diverse customer base. It spans many different subsegments. It requires our highest performance technology, as you well know. It also supports very long life cycles and earns above corporate average gross margins.

During the fourth quarter, our automotive business, at 14% of sales, performed in line with expectations and was stable to the prior quarter. While near-term demand, we believe, is being impacted by lower-than-anticipated sales of premium vehicles in China, premium automotive suppliers continue to incorporate ADI's high-performance technologies in applications such as radar-based advanced driver system systems and powertrain efficiency systems, which grew 33% and 10%, respectively, during the FY15.

Automotive revenue for the year totaled $526 million, growing at a 9% revenue CAGR over the past five years, which is in fact three times the rate of vehicle unit growth over this period. So in total, ADI's fiscal 15 revenue increased 20% from the prior year and totaled $3.4 billion.

So now I'd like to turn the call over to Dave for details of our financial performance in the fourth quarter and in FY15. With the exception of revenue and other expense, Dave's comments in fourth-quarter and FY15 P&L line items, free cash flow and free cash flow margin will exclude special items, which in the aggregate totaled $243 million for the quarter and $335 million, respectively, for the year.

When comparing our fourth-quarter and full-year performance to our historical performance, special items are also excluded from prior-quarter and year-over-year results. And reconciliations of these non-GAAP measures to their comparable GAAP measures are included on Schedule E and Schedule F in today's earnings release.

So with that, Dave, I'll turn it over to you.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Thanks, Ali. Good morning, everyone, and thank you for joining us. The fourth quarter was once again a very strong and profitable quarter for ADI and we set records for quarterly revenue, earnings per share and cash flow generation.

Revenue this quarter increased to a record $979 million, and diluted earnings per share was $1.03, with both results above the high end of our guidance. Gross margins this quarter were 65.7%, which was in line with our guidance and down 40 basis points from the prior quarter, primarily due to mix.

Days of inventory in the fourth quarter decreased to 114 days from the prior quarter's 128 days, primarily on higher revenue. And dollars of inventory decreased $12 million over the prior quarter.

Weeks of inventory in distribution were approximately 7.5 weeks, which was consistent with the prior quarter. Total end customer orders decreased in the fourth quarter as compared to the third, which is quite typical in advance of a seasonally slow first quarter. And our book-to-bill was below 1.

Operating expenses in the fourth quarter increased 6% sequentially, lagging well behind the 13% sequential increase in revenue as we continued to manage operating costs very tightly, allowing us to gain more operating leverage in our model. As a percent of sales, operating expenses in the fourth quarter declined over 200 basis points compared to the prior quarter, and declined over 300 basis points compared to the same period a year ago.

Operating profits before tax increased to $351 million or 35.9% of sales, which is 170 basis points higher compared to the prior quarter and 270 basis points higher than the same quarter in the prior year. Other expense in the fourth quarter was approximately $4 million and represented the net interest expense on our debt.

Our annual tax rate was lower than the rate we had anticipated at the end of our third quarter. As a result, we trued up our tax rate in the fourth quarter of FY15, which had the effect of increasing the fourth-quarter EPS by $0.10 per share. Even when excluding the positive impact from the tax adjustment, diluted earnings per share grew 21% sequentially on the 13% increase in revenue and was again above the high end of our guidance.

Cash flow in the fourth quarter was very strong. Excluding a special payment associated with the conversion of our Irish pension plan, ADI generated $422 million, or 43% of sales, in operating cash flow and CapEx was $46 million, resulting in free cash flow of $376 million or 38% of revenue. FY15 capital spending was $154 million and our plan for 2016 is for capital spending to be between $140 million and $160 million.

At the end of the fourth quarter, our cash and short-term investment balance was $3 billion, with approximately $700 million available domestically. We had approximately $870 million in debt outstanding, which resulted in a net cash position of $2.1 billion.

During the quarter, we returned $237 million to our shareholders in the form of dividends and share repurchases, which included higher share buyback activity of $112 million, as our buyback program responded to the volatility in our stock price.

On November 23, 2015, our Board of Directors declared a cash dividend of $0.40 per outstanding share of common stock. This dividend will be paid on December 15 to all shareholders of record at the close of business on December 4.

Now let me take a moment to talk about our performance in 2015. Revenues of $3.4 billion increased 20% over the prior year, and non-GAAP diluted earnings per share increased 33% to $3.17.

Our cash flow generation was strong during the year. Excluding the previously-mentioned Irish pension plan, operating cash flows were 33% of sales, or over $1 billion, and free cash flow was 29% of sales or $978 million for the year.

During the year, we returned $718 million to shareholders in dividends and share repurchases. We also increased our dividend by 8% in FY15, which was our 12th dividend increase in the last 11 years.

All told, ADI had a very good fourth quarter and FY15. Our financial model converted top-line growth into very strong earnings growth and we continued to generate strong cash flows while enhancing shareholder returns.

So now to our outlook for the first quarter which, with the exception of revenue expectations, is on a non-GAAP basis, and excludes special items that are outlined in today's release. Our current expectations for the first quarter of 2016 is for revenue to be in the range of $805 million to $855 million, which would represent a sequential revenue decline of approximately 18% to 13%. It is important to note that excluding consumer, ADI revenues at the midpoint of this range are expected to decline sequentially at a mid-single-digit rate, which is in line with seasonal trends.

The most significant sequential revenue decrease is expected to be in our consumer business, which is seasonally down in the first quarter but will likely exhibit more pronounced seasonality after a very strong fourth quarter, in which it grew 53% sequentially. In the industrial and automotive markets, we also believe that seasonal trends will largely prevail. Our communications infrastructure business is expected to remain relatively stable to fourth-quarter levels, ahead of seasonal patterns, on a continuation of the modest but steady recovery in this market.

The midpoint of our guidance range represents an increase of 8% year over year and would mark the ninth consecutive quarter of year-over-year revenue increases for ADI, which would be quite a good achievement.

Given our plan for lower sequential revenue and, as is typical in our first fiscal quarter, we are reducing production levels in the first quarter to approximately 60% from their current mid-70% level. As a result, we expect first-quarter 2016 gross margins to be approximately 64.5%. By remaining disciplined on our production levels, we believe inventories will be well-positioned to support strong leverage once we resume sequential revenue growth.

We expect operating expenses in the first quarter to be between $274 million and $279 million, which would represent a sequential decline of approximately 6%. We're planning for our tax rate to be approximately 14% in the first quarter, which is also our planned non-GAAP tax rate for fiscal 2016.

In total, excluding special items, we expect diluted earnings per share in the first quarter to be between $0.65 and $0.73. At the midpoint of this range, diluted earnings per share is expected to grow 10% year over year and this would represent the 11th consecutive quarter of year-over-year earnings-per-share growth for ADI, which would also be a very good result.

We believe that our financial results are a good proof point that our strategy to focus on sustainable innovation across diverse applications and markets is working.

And with that, I'll turn it over to Vince.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thank you, Dave. Good morning, everyone. As Dave and Ali have highlighted, FY15 was a very good year for ADI in terms of our financial performance.

Our strategy, which emphasizes technology innovation and platform reuse across a diversity of applications, proved itself once again. Thus, even though the uncertain macro economy impacted industrial and automotive and cyclical headwinds reduced communications infrastructure sales, these were more than offset by significant uptake of our signal processing technology in portable consumer devices.

It was also an excellent year in terms of key accomplishments. In 2015, we successfully integrated Hittite, and expanded available opportunities that we believe will deliver strong revenue synergies starting in 2017. Our integration teams and processes are finely-tuned and have successfully achieved our 2015 cost synergy targets, which are expected to accelerate further in 2016.

During the year, we continued to align our investments to critical strategic priorities, streamlining our management structure, while making investments to support our future growth. But as we take stock at the end of this fiscal year, I think it's important to look at our past performance over a longer period, and provide investors some context on where we have come from and where we want to take our Company.

Over the last three years, despite an uneven macroeconomic backdrop, we have grown our revenue at an 8% annualized growth rate and we have converted this top-line growth into 14% diluted earnings-per-share growth. We've also been committed to returning cash to our investors. Over the last three years, we have grown our dividend at a 10% annualized rate, while returning $2 billion to shareholders in dividends and share buybacks. And our annualized TSR over this period is 16%, which is in fact higher than the S&P 500 return over this period.

As Dave mentioned, ADI's FY15 diluted earnings per share were $3.17 and it is our goal to increase our non-GAAP earnings per share to up to $5 by FY20. And I think this is also an opportune time to point out that as we stand today, we are in fact ahead of this schedule in reaching this goal.

We've also invested and continue to invest in future growth opportunities. Over the past three years, we've invested over $4 billion in future growth initiatives through R&D, M&A and capital additions. These are significant investments that we believe have been made at the right time in our Company's history and hold us in good stead for the coming opportunities that we believe will drive our future growth.

Over our first 50 years, we have created a tremendous market share position in the foundational technologies that form virtual bridges between the physical and digital worlds. When customers need to reliably sense, measure, interpret and connect physical, chemical and biological phenomena to computational domain, ADI has become their go-to supplier. It is our view that as the world becomes increasingly connected and machines become more autonomous, the demand for more and more virtual bridges is quite likely to increase and this trend clearly plays to our core capabilities.

In our terminology, we believe that the information and communications technology sector has entered its third wave. The first two waves were dominated by big iron, personal computing, mobility and connectivity. Various monikers are being applied to the third wave, such as the Internet of Things, Industrial 4.0 and so on.

Whatever it's called, it's going to be about the pervasive us of artificial sensory and computing power for people and machines to see, to hear, to feel, and so on, throughout the physical space. As this third wave begins to take shape, it is creating growth opportunities for ADI that we expect will be beyond those achieved in the prior two waves.

ADI's 50 years of signal processing leadership is at the center of this third wave. With the combination of the cloud and big data, we can enable a real-time understanding of what's going on in our world so that we can act, react and predict in high-value applications in areas such as healthcare, industrial and automotive applications, for example.

In fact, existing and new customers are inviting ADI to help them to build even more virtual bridges to enable them to unlock the latent value and create potential new revenue streams. For example, many of our industrial customers, who in the past may have worked with us to control their most valuable engines and industrial machines, are today looking to massively instrument those very same machines and capture the value created by the data they generate.

The value of the information generated, in fact, has the potential to become even greater than the value of the actual thing it is connected to. And this is very exciting for our customers and, in turn, it's also very exciting for us here at ADI.

We are the acknowledged market leader in converters and amplifiers, two of the most critical technologies that bridge the physical and digital worlds. And we've also focused significant technical talent over many years on the development of ultra low power sensors and micro controllers that are optimized for reliable, power-efficient IoT solutions. Equally as important, our recent acquisition of Hittite means that ADI also possesses the full range of connectivity solutions necessary to transmit data to the cloud for analysis of trends and patterns and then back to the node to be acted upon.

We've made steady progress this year in applying our silicon technology and algorithm heritage and strengths in deep domain and applications knowledge at the physical edge to create complete sensor-to-cloud solutions that are efficient, secure, and reliable. This creates the possibility for ADI to not only create, but also to capture additional value as we move more deeply into the information spectrum. We will continue to build momentum in these novel growth applications in the years ahead while ensuring that we continue to strengthen our technologies and customer engagements in our core business. At ADI, we're very excited about applying our expertise to create solutions that solve the most important problems, leading to smarter cities, smarter buildings and factories, as well as transforming healthcare and, ultimately, people's lives.

Now, these are just some of the myriad applications with which we are helping our customers. Our customers are increasingly involving ADI early in their innovation conversations and leveraging our capabilities to architect solutions to these very tough challenges. As the third wave takes root, we expect that growth from these high-performance solutions will drive future revenue and profit growth for ADI.

So before I finish, I would just like to reiterate our oft-spoken strategic objectives. Firstly, we believe that innovation drives business success. We focus on sizeable markets that value the performance we deliver in high-value areas at the intersection of the physical and digital worlds.

Secondly, we believe in diversity of markets, applications and customers. We place many modest new product bets in carefully-chosen applications, and engage directly with the customers that represent a very large part of our served available market. Diversity ensures sustainability and resilience and this has been proven by our ability to successfully navigate the extraordinary transitions in the semiconductor industry over the past 50 years.

Thirdly, innovation and diversity enable ADI to build wide and sustainable economic [nodes] that enhance shareholder value. And of course, this is all made possible by the talent, the ingenuity and passion of our global workforce, who continuously raise the standards in technology, customer engagement, supply chain and myriad other areas in a business as complex as ours.

As the markets we serve move closer to ADI, I firmly believe our best days lie ahead of us. Thank you.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Great, thanks, Vince.

For those listeners interested in learning more about ADI in the IoT space, we recently webcast a 45-minute presentation that actually goes into this topic in much greater detail. You can find all that information on our IR page.

So let's talk quickly about how we run the Q&A session. I'm going to ask that you limit yourself to one question. We're going to run the call until 11:00 a.m. So after you ask your primary question and if you still want to ask a follow-on, you should requeue. And as we say each quarter, we run the call in this format in the spirit of fairness so that all callers get a chance to ask at least one of their questions.

So with that, Operator, let's go to the Q&A.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions)

Our first question comes from Romit Shah with Nomura Securities.

Romit Shah - *Nomura Securities Co., Ltd. - Analyst*

Yes, thank you. Dave, just historically, April has been one of your better periods in the year, I think on average probably up mid to high single digits. But now that consumer is such a more significant portion of the business, how do you think about seasonality in the April period?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Thanks, Romit. I think you're right in that obviously when we are more concentrated in industrial, we would have seen a much bigger ramp seasonally in the second quarter. We expect to see that seasonality in the second quarter for industrial, but consumer now as a larger portion of our revenue is a bit of a wild card. I think that that quarter is generally seasonally down a little bit.

Obviously, we don't have any visibility into the quarter yet. But that would mute a little bit the sequential increase that you would typically see in the second quarter. But as you know, this is the semiconductor business and you never really know how things will pan out until you're really up on top of that quarter and can make a better determination.

Romit Shah - *Nomura Securities Co., Ltd. - Analyst*

Thank you.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Sure.

Operator

Our next question comes from Chris Danely with Citigroup.

Chris Danely - *Citigroup - Analyst*

Nice quarter, I guess you can go tell Tom Brady eat your heart out. So if we look what happened in October and January, a little more revenue volatility than historical at ADI.

So I guess to continue on Romit's question, how do we think about seasonality in 2016? And with that $980 million quarterly revenue bogey, what gives you confidence you guys can exceed $980 million in either the July or the October quarter in 2016? Maybe just talk about just visibility on the consumer front?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Yes, we'll have obviously a larger consumer business. Generally the second half of the year is much stronger than the first half of the year, at least from a fiscal year basis for us, given that that's generally when new product launches happen, Christmas builds happen, and so forth. So that will definitely change the seasonality a bit for the overall Company.

My guess is that typical seasonality for ADI is going to be relatively similar sequential increases every quarter for different reasons. Obviously, the second quarter would be more of an industrial story. The third and fourth quarter are likely to be more of a consumer story.

What was your other question, Chris? I missed it.

Chris Danely - *Citigroup - Analyst*

Just talk about visibility on the consumer front. How do you feel about maintaining market share there in the second half of the year and to exceed $980 million in revenue?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Well again, we have real confidence in revenue when we actually have orders, and we have orders usually out about through the following quarter. So it's difficult for me to say what's going to happen over the next few quarters. But I would say our position with all of our large customers is very strong, and we expect to have a strong position with all of those customers out for the distant future.

Chris Danely - *Citigroup - Analyst*

Thanks.

Operator

Your next question comes from John Pitzer with Credit Suisse.

John Pitzer - *Credit Suisse - Analyst*

Congratulations on the strong results for the fiscal year. I guess another question on the consumer side. If you look at the revenue ramp over the last several quarters, the vast majority of that has been driven by Force Touch.

You guys are a relatively new supplier for a new application that the customer feels is important enough that they actually highlight it in their advertising. And we know there's been some yield issues on the module away from you. And if we try to back into your revenue coming from Force Touch and try to equate that to a unit number for your customer, it does appear that you're over-shipping.

So, Dave, I'm wondering if you could help us understand. When you look at the January quarter, do you think you are over-shipping to your customer right now? And when you look at the guidance for consumer in the January quarter, do you get most of that back in January so you feel more comfortable that you're not over-shipping the demand right now?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Well let me start by saying that obviously, we don't talk about individual products and individual customers. Our customers don't appreciate that, and it's really up to them to start talking about what their end markets are doing and their applications are doing. But I'll talk specifically about our consumer business.

Clearly, the first or the back half of this year had a very good ramp, and that was driven not by one single product and quite honestly not by one single customer. We did announce in our 10-K, we had a 13% customer for the year. So obviously -- and that's unique, so obviously we did have one customer that did quite well. But there were a lot of things that did very well for us in the consumer business in the back half of the year, so that's one thing I think everyone should keep in mind.

Clearly, when you have a big ramp like we did in the fourth quarter and we telegraph a decent sequential decline in the first quarter, that would indicate something is going on. And I think it's safe to assume that there probably was inventory that built in the fourth quarter for reasons that are specific to those customers and how they want to manage their supply chains and so forth.

But I don't think it was anything out of the ordinary. I think it's relatively typical for how those customers manage their inventory, and as is the first quarter decline, which I think starts to digest that inventory. I don't know how long it takes for that whole thing to smooth out. A consumer business of this size, particularly driven off of portables, is a bit different for us than we have historically had a position in.

So we'll have to see how it goes. But my guess is that it picks back up in the third and fourth quarter, and does quite well. And all of that stuff will make sense to all of you guys that try to back into end consumption and so forth.

John Pitzer - *Credit Suisse - Analyst*

Helpful, guys. Thank you.

Operator

Your next question comes from Craig Ellis with B. Riley.

Craig Ellis - *B. Riley & Co. - Analyst*

Thanks for taking the question, guys, and congratulations on the strong results. Dave, on the gross margin outlook with the sequential decrease, can you just frame up some of the gives and takes? Because it would seem like mix would be a tailwind to gross margin, but volume looks like a headwind. What was utilization in the quarter, and where do you think it is in the outlook? And what does your ability to control inventory mean for the gross margin trajectory as we look out to the April quarter and beyond? Thank you.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Yes, so I think I talked about utilization was in -- help me out Ali.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Utilization in the quarter was in the mid 70s, but we're bringing it down to about 60% in the first quarter.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Right. So that obviously will drive most of the gross margin decline. There is a bit of mix also, as you point out, that is driving a little bit of the gross margins.

I would say that the mix decline, fourth quarter to first quarter, has a little bit more to do with, believe it or not, mix within the industrial space, not mix within our broader business categories. So that's what will drive the gross margins.

After that, obviously we'd expect to be bringing back our utilization. Hopefully seasonally, we see a strong industrial ramp in the second quarter, and that would certainly drive better volume within the factories and should get the gross margins back up to the levels that we see today.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Our industrial business today, Craig, is about 10% odd off of its revenue peaks that we achieved back in the third quarter of 2014. So I think our goal here is to really get the inventories in good shape, which we are trying to do here in the first quarter with pretty low utilization rates, precisely for that reason, to get inventories in good shape for what we hope will be a seasonal second quarter. Obviously, it's too early to call that at this stage.

But if we do see seasonality in the second quarter, then industrial generally does better. And we should see some pretty good gross margins and drop-through to earnings. So, hope that answers the question and let's get to the next caller.

Operator

Our next question comes from Tore Svanberg with Stifel.

Tore Svanberg - *Stifel Nicolaus - Analyst*

Yes, thank you, great results. So your backlog is up 16%. Is there anything that I can read into with that number? And I'm thinking especially since your backlog is obviously for several months further out, if we take the consumer out of that equation, does that number signal that your industrial and communications business is strengthening?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Well I think most of it is I think at the midpoint of our guidance, we're looking at 8% year over year. Because if I'm not mistaken, the backlog that you're talking about, Tore, in the 10-K is a comparison of the backlog coming into last year versus the backlog coming into this year. And we are predicting revenue to be up 8%, so it's not surprising that backlog would be up.

The other thing is I think in some cases, the consumer business which will be up year over year probably pretty meaningfully gives us a little bit more visibility than some of the other markets. And so from a mix perspective, that actually helps on the visibility in terms of backlog, but it really isn't extending the visibility at all. It's still all shippable within the quarter, for the most part, and really doesn't influence how we would think that the second quarter would pan out.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Let me just, Tore, give you a little bit of color. You mentioned specifically industrial and communications infrastructure, so let me give you a little bit of color around the bookings in the quarter.

For industrial, we saw August quite weak, as it generally is seasonally in that month. September was actually quite stable, which is a bit of an anomaly really in the industrial business.

Generally speaking, September comes back quite nicely. This time around, it was actually quite stable to August levels. And I think if you remember back, there were some pretty screaming macro headlines at that point in time.

Interestingly then, the October month actually was quite strong for the industrial business and November seems to have leveled off here a little bit. And I think we're feeling pretty good about the environment, generally thinking about a pretty seasonal environment for the first quarter for industrial.

We haven't mentioned it yet, but the weeks of inventory in distribution were 7.5 weeks, consistent with the prior quarter. Our deferred gross revenue balance, which is a pretty good proxy for inventory in the channel at revenue dollars, was down 2% in the quarter. So I think it's all hanging together there as far as we can tell here for the next quarter, and that's definitely in our guidance.

On the communications infrastructure side, it was up 12% sequentially this quarter in terms of revenue. Wireline was down somewhat, so the implication there is that wireless actually did better than the 12%, which it in fact did. I think most of that, we told you last quarter that we felt like we were under-shipping end demand in that space.

I think a lot of that this quarter, in terms of revenue performance, was a result of inventory coming back in line with demand. You're starting to see some good base station deployment activity there, although still it's obviously early to call. But in terms of the order flows in comms during the quarter, we actually saw better order flow every month of the quarter in the comms space.

So that's where we are at. I hope that answered the question, and let's get to our next caller.

Tore Svanberg - *Stifel Nicolaus - Analyst*

Very helpful, thank you.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Great.

Operator

Our next question is from Craig Hettenbach with Morgan Stanley.

Craig Hettenbach - *Morgan Stanley - Analyst*

Yes, thanks. I just wanted to discuss your approach to capital allocation. If I look at it, you've had a healthy mix, certainly a focus on dividend increases, the Hittite deal, opportunistic M&A. On the M&A front, and especially as the industry consolidates, just how you approach that relative to the return of cash, and any type of metrics you're most focused on.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Thanks, Craig. So obviously, we are focused on the dividend. We mentioned it in the prepared remarks that we would like to see that continually increase. I think we've had 12 increases in the last 11 years, so we'd like to keep on that pace.

We do do opportunistic buybacks. We think some of our shareholders do favor the buyback, or at least appreciate the buyback, and so we have maintained a relatively consistent approach. It does tend to buy back more when the stock is weaker, which I think is provides a good return on investment for the shareholders.

And then lastly as you point out, Craig, we do have an M&A approach. We have a very high bar in terms of M&A. We certainly don't look or kick the tires on a lot of deals; we pick the ones that are of very high quality. It really starts with companies that have a high degree of innovation and where that innovation is, I guess, complementary to our own technology with our existing customer base.

So we will do deals from time to time. They generally will be in the Hittite size range or probably lower in some cases. We're actively looking at things.

When you tend to look at businesses that do have a high degree of innovation, it usually comes with really good gross margins, very good operating margins, very good return on R&D investments and so forth. So I think from a financial perspective, those are somewhat of the outputs as opposed to the inputs. But those do tend to go hand in glove with really innovative companies.

Craig Hettenbach - *Morgan Stanley - Analyst*

Got it. Thanks for the color, Dave.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Sure.

Operator

Our next question comes from Amit Daryanani with RBC.

Amit Daryanani - *RBC Capital Markets - Analyst*

Thanks a lot for taking my question, guys. I guess one of the biggest things that people tend to talk about you guys recently is just the concentration issue with your largest customer at this point.

So maybe if you could just talk about the solution or the products that you have with your largest customer? The potential to expand that into other solutions, into other vectors, be that consumer out in different sectors. And would you ever look at M&A as a way to diversify concentration?

Vincent Roche - *Analog Devices Incorporated - CEO*

Actually, we've never been more diversified as a company. We have more products in the portfolio than we've ever had. We address more customers than we've ever addressed. So we're actually as a company, in a very, very good position on that front.

With regard to the consumer market in general, we have very strong leverage from our core technology platforms. In the consumer business, it tends to be more of a precision-oriented product development effort. So we get very strong leverage, for example, from our industrial product base which tends to be precision-oriented inherently.

So we're looking always for areas. Innovation comes first for us. We build the core technologies, we platformize the technology, bring it to as many applications as we possibly can. And in the consumer area, we're picking out the very, very highest-level challenges that we can possibly address, and we believe those problems are sustainable over time.

Of course, time will tell whether that's well-founded or not. But we believe we're in a very, very good position. And as Dave mentioned earlier, even within each customer, we look for diversification of applications and products and technology. And that is the case everywhere we're playing in the consumer area as well.

Dave Zinsner - *Analog Devices Incorporated - CFO*

And I'd just add on the M&A front, we don't drive our M&A off of a diversification approach, because we're concentrated with one customer. We do pick usually companies that have a lot of diversity, and by virtue of that, we do get a lot of diversity. But our first and foremost objective is to find really great technology that complements our existing technology.

Amit Daryanani - *RBC Capital Markets - Analyst*

Perfect, thanks. And congrats on the quarter, guys.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Thanks.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thank you.

Operator

Our next question comes from Chris Caso with Susquehanna Financial.

Chris Caso - *Susquehanna Financial Group - Analyst*

Yes, thank you, good morning. Question on the comm space and some of your -- a follow-up on some of your comments there.

I guess particularly within the wireless part of that space, do you think the excess inventory within that space has been digested at this point, so that going forward, the growth in that segment should be proportional to the growth in base station deployments? And obviously understand that those base station deployments are well below their prior peak.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Chris, thanks for the question. Obviously, never say never, right? It's a lumpy market for a reason.

But our sense when we look at the order flows, when we talk to our customers, is that that period of time where the inventories were massively drawn down is behind us. So obviously, we can't speak for other companies and other suppliers. But what we can tell for our products, what we're shipping into the space at the current moment is pretty well-balanced with end demand in the space.

And frankly, when we looked at the order flows and we were thinking about the guidance for the first quarter, generally speaking, the first quarter is down in high single digits sequentially for the comm space. And this time if you back into the guidance that we're implying, it will be fairly stable.

So if you look at the regional perspective, North America has been pretty stable. China now has started to deploy TD and FD. Again, it's slow, but it has started. So we saw some impact and some good benefit for that in our quarter.

And if you look at emerging regions, they continue to deploy. We had a particularly a good quarter in India this quarter, for example. So I think things are moving, I think they're slow and steady, but at least they are going in the right direction.

Chris Caso - *Susquehanna Financial Group - Analyst*

Thank you.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Sure.

Operator

Our next question is from William Stein with SunTrust.

William Stein - *SunTrust Robinson Humphrey - Analyst*

Thanks for taking my question. Vince, you highlighted what sounds like what could be a virtuous cycle between your comm infrastructure end market on one hand, and the other three end markets.

And I guess it raises a question as to which of these you expect to grow fastest as you enter this environment or this thing you described as the third wave. And I also wonder whether consolidation plays into that thinking, and whether M&A plays into the thinking of where to position relative to that virtuous cycle of data development?

Vincent Roche - *Analog Devices Incorporated - CEO*

Great question. So we have a long-term model. For growth, we believe that the markets that we can, if you like, leverage most in terms of driving growth are at the upper end of our 2 to 3 times GDP model, are the automotive and communications infrastructure areas. And I still believe that to be true.

We put out some targets last year at the analyst day, and I think those targets are still valid there. Obviously consumer is going to be at the upper end of that as well.

I think if we can, over the long term, and we have certainly for the last three years, been able to drive our industrial business at a couple of times GDP level. We would be in very, very good stead well into the future. And what I've given you in terms of those targets is really about what we do organically, rather than whether we have to buy more heft.

As Dave has indicated, we're always scouting around looking for technologies that make more of an impact to the overall solution that we deliver to our customers. And we're taking more of a strategic view, rather than a financial view or an operating view of M&A.

So it's more about finding those bolt-in technologies that make ADI more relevant, make our technology and product offering more powerful in the eyes of the customer. But generally speaking, I think we're in a very, very good position to organically take care of our future.

William Stein - *SunTrust Robinson Humphrey - Analyst*

Thank you.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Thanks, Will. Next question, please.

Operator

Our next question comes from David Wong with Wells Fargo.

David Wong - *Wells Fargo Securities, LLC - Analyst*

Thanks very much. When we look at your industrial and communications segments and the year-over-year comparisons, do you reckon these numbers reflect the end markets? Or are they suppressed by any rationalization of product lines or customer action following the Hittite acquisition?

Dave Zinsner - *Analog Devices Incorporated - CFO*

Well obviously, in the first quarter of 2015, we had Hittite, so really it's a direct comparison. I guess I do -- in the communications business, we are certainly operating at what is a lower level than what we think is the normal build-out of base stations on a year-on-year basis. So it's impacted by the reduction in spending in wireless infrastructure in a couple of different markets.

Granted, it has recovered from its trough, but it's not certainly at what would be considered normalized levels. I think in the industrial business, it was a relatively -- on a year-over-year basis, a relatively modest increase but within what a GDP-like growth rate has been. So I would say that probably reflects normal end demand in that market.

Vincent Roche - *Analog Devices Incorporated - CEO*

I will say, David, just to add a little more color, we had a record quarter with regard to the Hittite portfolio in the quarter just done. And given a relatively depressed communications market, though there was some recovery, what I've been most pleased about is the diversity of the applications we're able to target outside of the communications infrastructure business with that portfolio.

David Wong - *Wells Fargo Securities, LLC - Analyst*

Great, thanks.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Thanks, David.

Operator

Our next question is from Harlan Sur with JPMorgan.

Harlan Sur - *JPMorgan - Analyst*

Hello, good morning. Thanks and congratulations on the solid quarterly execution.

I think Ali said in the prepared remarks that the auto CAGR has been growing about 9% over the past few years, pretty solid performance. That's decelerated a bit to flat growth here in FY15. Looks like given the guidance around Q1, that's probably going to be flat year over year.

The team has talked about a better design win pipeline in terms of dollar content capture in 2016 within the automotive segment. So I guess the question is, is the team still relatively confident about the potential for reacceleration in automotive? And then which subsegments are you going to see more of the growth? Is it in powertrain and safety? Are you going to see some growth in infotainment as well? Thank you.

Vincent Roche - *Analog Devices Incorporated - CEO*

Yes, good question. So we've had a lot of inquiries over the last couple of quarters about our performance specifically in the automotive sector. And what I'll tell you is that it's really a tale of two businesses. During 2015, it was a relatively flat quarter.

And when you extract -- I think I've mentioned before to you that our men's safety business has had some, no pun intended, some speed bumps along the way here. But our automotive business, with the exception of men's safety, actually grew in the high single digits year over year. Primarily in the areas like advanced driver assistance, the predictive safety side of the business has grown at a stellar pace for the Company over the last three or four years. I believe that will be the case into the future. And the powertrain, specifically the sensing part of that business and the battery monitoring control, has done well and will continue to do well.

Infotainment is a very diversified area and we tend to target the high end of that business with our digital signal processing, and our data acquisition technology, and algorithmic technologies. We have a new technology called A to B, which is a method of moving sound through the car essentially, speech and sound, in a way that is very efficient, very, very low latency, very low weight in terms of the wiring cables and so on.

We have a lot of new sensing technology coming into play. An area like AMR, for example, where we are developing a leadership position which will be a whole new category in that business in the future as cars electrify and become more automated.

So I think what you can expect in the automotive business during this coming fiscal year is that the first half will be within seasonal pattern of the current business level. But the second half I do expect to pick up in the growth of the overall business at the higher end of the growth model, which is 3 times GDP levels.

So we're confident given the alignment between the products we have and customer programs that we've got. And it's an area where we have been intensively investing and increasing the investments over the past five years. So I think we'll return to a growth pattern towards the back end of 2016 and beyond, so that's my sense based on everything that I know at this point in time.

Harlan Sur - *JPMorgan - Analyst*

Great, thank you very much for the insights.

Vincent Roche - *Analog Devices Incorporated - CEO*

Sure.

Operator

Our next question comes from Vivek Arya with Bank of America Merrill Lynch.

Vivek Arya - *BofA Merrill Lynch - Analyst*

Thank you for taking my question, and congratulations on the good results and execution.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thank you.

Vivek Arya - *BofA Merrill Lynch - Analyst*

I just wanted to clarify on this overbuild versus underbuild in consumer so we don't blow it out of proportion. So, Dave, on Q4, you mentioned some slight overbuild. Is it possible to quantify that?

And then as we then look at Q1, I assume there is perhaps some underbuild. So as you emerge from Q1, are you going to emerge with some signs of shipping into actual demand? And I know it's probably a little early, but how does rough visibility look like for Q2? Thank you.

Dave Zinsner - *Analog Devices Incorporated - CFO*

We have -- like I said, we've got little visibility into Q2 and it would be premature for me to even mention which direction it would even go. Yes, I don't want to -- and I think you actually point out a good point. And I don't want to over emphasize builds.

Most of that, we believe, most of the shipments were consumed. But when you have a fourth quarter to first quarter transition like we're talking about, you have to believe that there's some kind of digestion that happens for a little bit of it, which drives us to believe that on a sequential basis, consumer is going to be down. And that's why we're guiding to where we're guiding, and it will probably be down more than the corporate average.

Outside of that, I can't give any more visibility. Obviously, there's a lot of moving pieces within the consumer business and trying to identify every application and every customer that's going into and figuring out what they are all doing is next to impossible for us. We get the orders, we ship them, and we leave it to them to figure out what to do beyond that.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

It's probably a good time to reemphasize that despite all the near-term noise, that year-over-year revenue growth in the first quarter at the midpoint would be 8%, with double-digit EPS growth. So thanks for the question, Vivek, we'll get to our next caller.

Operator

Our next question is from Steve Smigie with Raymond James.

Steve Smigie - *Raymond James & Associates, Inc. - Analyst*

Thanks a lot, guys. Just a quick follow-up on the out-performance in the quarter.

I think you mentioned that it was due to multiple products there in consumer. Obviously, there's been some discussion of Force Touch. Can you talk about what products other than Force Touch were part of the out-performance in the quarter?

Dave Zinsner - *Analog Devices Incorporated - CFO*

I'm not even saying that was a reason of the out-performance in the quarter. All I can say, Steve, is that we have several customers, many customers, within our consumer business. We have lots of customers in the portable side of the business, and we have a lot of different products that go into those applications.

Vincent Roche - *Analog Devices Incorporated - CEO*

To give you a sense, we -- again, the products we ship into these applications tend to be precision-oriented in areas like sensing, in audio, and also in the area of image processing. So there are the three categories you should think about when you think of ADI's position within these portable consumer applications.

Steve Smigie - *Raymond James & Associates, Inc. - Analyst*

Okay, great. Thank you.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Thanks, Steve. This is Ali here. We're three minutes short of the hour. I think we're going to keep going with the questions, but I think the time is probably over for those who have requeued unfortunately. So I think let's keep going to at least get everybody's first questions in. We'll get to our next caller.

Operator

Our next question is from C.J. Muse with Evercore ISI.

C.J. Muse - *Evercore ISI - Analyst*

Good morning, thanks for squeezing me in. Overall looking for your big picture macro view here, what are your thoughts in terms of where we are in the cycle? Where do you see pockets of health, maybe pockets of weakness, and there really speaking geographically? And how all of that shapes up in terms of the recovery picture in the first half of 2016?

Vincent Roche - *Analog Devices Incorporated - CEO*

Yes, I'm not sure there is a cycle, by the way, any more in the semiconductor industry. And I think a lot of the consolidation somewhat ensures that as well. Do I think there's a decent match between supply and demand right at this point in time.

Over the years, we've all developed methods to deal with the volatility and we have a lot more transparency I think now as well into the areas of supply and demand. So I think in some ways what you should be looking at for 2016 is probably what the macroeconomic climate does. And we've started messaging our growth trajectory or the algorithm we have for growth as well on that basis -- some multiple given the various markets in which we play and what they are capable of delivering in terms of macro level growth, and modulated by where we are with our products and technologies and our customers in these areas. So I'm not sure there is a particular cycle in our industry any more. And probably safer to look at what the macro environment does in the various regions.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Thanks, C.J. Let's get to our next caller.

Operator

Our next question comes from Tristan Gerra with Baird.

Tristan Gerra - *Robert W. Baird & Company, Inc. - Analyst*

Thank you. To follow up on your commentary about automotive, what type of market share position do you think you can have in driver assist over the next couple of years and on the basis of your design wins? And how big does it get as a percent of your automotive market?

Vincent Roche - *Analog Devices Incorporated - CEO*

Yes, it's a good question, Tristan. Off the top of my head, I don't have the numbers. But the growth rate of our advanced driver assistance business has been one of the strongest, probably the strongest growth element by the way, during 2015. It's a meaningful part of ADI's overall automotive business node at this point in time. We have some very exciting new technology built on some microwave technology that we've built on a very, very advanced technology platform that we are about to -- we'll be sampling over this coming year to our customers that will change the game in radar technologies.

And so I think when you look at that business overall, certainly safety is going to continue to be a very important part, given the mandates and everybody wants more safety. So and I think the capabilities that we have as a company as well in active, passive and combining those with predictive, puts us in quite a unique position actually to be able to look at the safety problem as a system of problems and tailor our solutions to those needs.

Tristan Gerra - *Robert W. Baird & Company, Inc. - Analyst*

Great, thank you.

Operator

Our next question comes from Ambrish Srivastava with BMO.

Ambrish Srivastava - *BMO Capital Markets - Analyst*

Hello, thank you. Dave, I had a question on the CapEx guidance for the full year.

And also along those lines, free cash flow margin, given that a higher ROI and a higher operating margin business is going to be a bigger portion of the mix. Should we expect that free cash flow margin for FY16 should be higher? Thank you.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Yes, we're certainly driving the free cash flow to be higher. That is our goal. And then the portion on the CapEx, we're striving towards 4% or so CapEx as a percent of revenue; that's really our goal.

I think we had a very good year in terms of free cash flow this year. I think we can do better next year with a lower CapEx as a percent of revenue to help drive that a little bit. And there's some things, we did have to build inventory this year up for some ramps that occurred and some last time builds related to Hittite.

Those activities are behind us in terms of building inventory. So we should get I think a pretty favorable working capital number for 2016, which could help drive a better free cash flow number for 2016 as well.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Yes, and if I can just add quickly, Ambrish, free cash flow for the year excluding the one-time pension payment was 29% of revenue. The model range is 28% to 32%. So I think we're within that range, but certainly towards the lower end of the range.

And within the quarter, we generated ex that payment, 38% of our sales in free cash flow which is actually very, very strong. And as you know, we return 80% of everything we generate to shareholders, either through dividend or buyback. So thanks for the question, and next caller.

Operator

Our next question comes from Harsh Kumar with Stephens.

Harsh Kumar - *Stephens Inc. - Analyst*

Great results, great guidance. Great results. Let me just ask quickly about wireless infrastructure.

It's quite a bit off the peak that you guys hit I think in the January part of this year. You're talking about some pretty good trends happening right now as you see it in wireless infrastructure. What is your best view of how the environment is looking as you get into next year and maybe also 2016 for comm?

Vincent Roche - *Analog Devices Incorporated - CEO*

Yes, well as Ali said earlier on, from a geographical perspective, North America was pretty flat. I think the story in terms of demand has been driven by China over the course of FY15. The government carrier investigations have had a huge impact on the deployment of infrastructure there. So I think the pace will pick up in the -- we've seen some pickup over the last quarter. Demand has solidified and strengthened.

But I think during 2016, you will see a pickup in the FD deployments. FDD, TD, and particularly in the area of with regard to China Mobile. Small cell deployments in the second half of the year to densify the network and get more capacity.

And my sense is that 4G we've seen, for example, in India over the past quarter some good deployments in an area where the deployment of LTE is really, really low and has a long way to go. And I think it will be steady in America and probably grow margin in Europe, as carriers deploy more infrastructure there to catch the networks up from in a lot of places still 2.5G into 4G.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Harsh, I think it's a question of when, not if. And I think we're very well-positioned across all the carriers and all the regions. So inventories look to be in good shape. The orders, hopefully, will hold up.

As you mentioned, our comms business is well off its peaks. I think I looked back and it's about 23% off of its recent revenue peak. So I think there's plenty more to go there, and it's a question of when not if. So thanks for the question and [we'll get to it].

Harsh Kumar - *Stephens Inc. - Analyst*

Great, guys.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thank you.

Operator

Our next question is from Ross Seymore with Deutsche Bank.

Ross Seymore - *Deutsche Bank - Analyst*

Sneaking me in and congratulations on the strong quarter. I had a question on the cash flow on the capital allocation side. You guys have done a great job returning cash, like you said about 95% of free cash flow in the last year. But that's come somewhat at the expense of domestic cash, which looks like it's down about 20%, 25% year over year.

So I guess my question is, when you guys have the domestic versus offshore cash, how do you reconcile that with both your cash return to shareholders, whether it's repurchase or dividend? And how does that impact your M&A strategy, if at all, acknowledging you were able to use offshore cash for Hittite?

Dave Zinsner - *Analog Devices Incorporated - CFO*

It's a complicated web, no doubt about it. I think in general, if we are returning 80% of our free cash flow back to shareholders, we don't generate at that level in the US. And obviously, all of that has to come from US cash flows.

So the US entity definitely will be a borrower, and that's why we have $3 billion of cash and $875 million of debt today, is because we lever up the US balance sheet, but on a net basis we still have a net cash position worldwide. And I think that's generally the approach.

There are situations in which international cash would be utilized. And as you point out, one of those would be for acquisitions. There's also a number of things that we could potentially do outside of the US in terms of acquisitions that it's not a very complicated transaction to utilize that cash. So we will use some of that cash obviously for M&A, but to the extent we need US cash, we will use the leverage to get there.

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

And, Ross, we have overall liquidity domestically of $1.3 billion to $1.4 billion, which obviously includes the revolver as well. But that gives us plenty of flexibility to do the things that we want to do here in the US. So thanks for the question, next caller please.

Operator

Our next question is from Blayne Curtis with Barclays.

Unidentified Participant

Thanks very much for taking the question. This is Chris on for Blayne. And congrats on the strong quarter and guidance.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thank you.

Unidentified Participant

I feel a bit like it's beating a dead horse here. But I just wanted to drill in on the consumer business, and if you could just talk a little about linearity over the last couple of quarters for the core business there. You've obviously had a big ramp in the consumer wireless space, but just the existing business outside of that big ramp, how has that trended over the past couple of quarters?

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Yes, I think let's just look at the last quarter here. Overall, I'd say orders excluding the consumer business in August were down from the prior quarter. They were slightly up in September, and October was very strong, as I mentioned earlier, particularly in the industrial space coming off of a weaker September.

So that's generally how it's trended. And I think we've given the guidance here for the first quarter based on what we're seeing in the order flows. So I think if you exclude the consumer business generally everything else is trending seasonally here into the first quarter. So thanks for the question, and we'll get to the next caller.

Operator

Our next question is from Doug Freedman with Sterne Agee.

Doug Freedman - *Sterne, Agee & Leach - Analyst*

Great, thanks for taking my questions and squeezing me in, guys. Real quickly, looking at gross margins, can you give us a sense to the range that we would see between the industrial, consumer, auto and comms groups?

I know you've mentioned that the industrial is contributing to a little bit of the headwind, because it is soft in the guidance. But I would have thought that consumer being below average would also have been a little bit of an offset. Maybe if you could help me just magnify the range that we would see across the businesses so we have a better understanding going forward? Thanks.

Dave Zinsner - *Analog Devices Incorporated - CFO*

Yes, I'll see if I can give you any color. The industrial business obviously is our highest gross margin business, and that is above the corporate average.

Communications is slightly above the corporate average. Consumer is slightly below the corporate average, and automotive is slightly below the corporate average. So those are the ranges.

The only challenge in that, Doug, is that there's also the dynamic of what gets made in the factory. And so sometimes mix does play a part in factory absorption, and how many wafers we produce, and so forth. So that's a complicating factor that drives a little bit of the gross margin.

But I would just tell you, maybe stepping back from it, we had a very good year in terms of gross margins for 2015. We were at 66%. We think that while focusing on innovation, we generally will get very good gross margins in the future.

We've got some things that we're looking at that we continue to execute on that help lower our costs and improve our pricing. In fact, I think over the last few years, our ASPs have been going up. So we think we have a very good opportunity to push those gross margins higher over the next few years.

Doug Freedman - *Sterne, Agee & Leach - Analyst*

Great, thanks so much, and congrats again.

Vincent Roche - *Analog Devices Incorporated - CEO*

Thanks, Doug.

Operator

Our next question is from Ian Ing with MKM Partners.

Ian Ing - *MKM Partners - Analyst*

Yes, thanks. So obviously, you're addressing a lot of opportunities here in converters and amplifiers; you've got good portfolios there. But could you remind us of your view on power management? Is this an area you'd like to get into perhaps to leverage your scale and customer-facing resources, or is it not interesting at this moment?

Vincent Roche - *Analog Devices Incorporated - CEO*

Well power management as a technology for us, we have good traction in areas like communications infrastructure. For us, we are not trying to build a broad-based catalog of products. What we are doing is taking the capability that we have inside the Company in terms of process, technology, and in terms of circuit technology, and applying that technology to build products that strengthen the overall signal chain, particularly in more vertical applications, where we can get the leverage in areas, as I said, like wireless communications infrastructure.

So that is the strategy for the Company in power management, and we've made some very, very good progress there over the last three or four years as we have given up the ghost in trying to build a broad catalog and branding power. But instead targeted very, very carefully at the applications where the interplay of power technology and signal chain technology creates a virtual cycle here.

Ian Ing - *MKM Partners - Analyst*

Thanks, Vincent.

Operator

Our last call comes from Stephen Chin with UBS.

Stephen Chin - *UBS - Analyst*

Hello, thanks for taking the question. I just wanted to ask a follow-up on automotive.

You gave good color earlier on some of the [tech] trends there. But just from a geographic and maybe a bigger macro perspective, was China the only area of weakness or were there any other geographies that showed softness in the quarter? And in addition to that, just with the potential for interest rates to increase in the coming quarters, do you think the higher cost of lending might impact auto sales as well?

Ali Husain - *Analog Devices Incorporated - Treasurer & Director of IR*

Yes, I think we're not a room of economists here for sure, but let us at least tell you what our thinking is, Stephen. So in the quarter, the business trended really as we expected, frankly. It was up 1% sequentially. All the three subsegments of automotive were essentially in line and pretty stable during the quarter.

When you started the year, the forecast for vehicle growth in China was 7%. And as we're ending the year here, it's down to about 1% or 2%, and China obviously consumes a good amount of premium vehicles.

For ADI, we've done the back-of-the-envelope math here on our revenue in the automotive space, and it's probably mid-teens impact from sales into China, so certainly that would have an impact on our revenue.

I think when you look across the other regions, I'd say North America has been doing quite well. The European vehicle registrations every month are up, so that's generally a good sign. When you look in North America, the average age of the vehicles is greater than its historical average. Dealer inventories are below their corporate average. In China, they've recently announced stimulus programs around sales tax for automotive.

So again, I'm not an economist and I don't play one on TV either. But from our sense, everything is trending as we would have expected, except I'd say for the China region which you know certainly has been weaker for the entire industry. And so certainly we're not going to be agnostic to that. That would have an impact on our sales as well, particularly as China consumes a fair amount of premium vehicles.

So I hope that answered your question, Stephen, and I guess that's the end of our earnings call here. We're 15 minutes past the hour.

As a reminder, our first quarter 2016 results are scheduled for February 17, again 8:00 AM press release Eastern Time, 10:00 AM earnings call. So thanks for joining us this morning, and we look forward to talking to you soon.

Operator

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