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ADI - Analog Devices Inc at Sanford C Bernstein Strategic Decisions Conference

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PRESENTATION

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I think we'll get started. Before I do start, I just wanted to mention the question cards on your chairs. We will leave time at the end for Q&A. So, if you do have a question, please fill up the card. They'll bring them up during the talk, during the presentation and we'll have time to ask those. So with that, good morning everyone, I'm Stacy Rasgon. I cover the US semiconductor sector here at Bernstein and it's my great honor today to introduce our guest, the Chief Financial Officer of Analog Devices, Mr. David Zinsner.

Of all the companies I cover, ADI is typically thought of as one of the most respected with an extremely high quality franchise in the analog space, particularly as it relates to signal conversion and processing. Over the last 10 years or so, the Company has embarked on a rationalization program of both their product portfolio as well as the manufacturing footprint. They're one of the few entities that were smart enough to exit the baseband business early enough to actually get paid to do it. And they've increasingly focused their product offerings on high-value applications, whatever the end-market. As well as greatly increasing their presence in new markets, automotive, healthcare, and even consumer recently. They took early steps before many of their peers, also to shutter unnecessary capacity. I think this has borne fruit. The Company is now operating in the ballpark of a long-term model that has trough margins that are considerably higher than their peak margins used to be with a very solid level of cash return.

And so given that, many of my conversations with investors on the Company now focus on growth. Can ADI achieve a higher level of organic growth like they've shown in the past? Are new consumer wireless wins, good or bad, both of the business and for the stock, which is not always the same thing? Should the Company be playing bigger on the M&A front? And what areas of innovation now coming into focus in order for the Company to drive that topline? So to answer these and other questions, it's my great pleasure to introduce the CFO of Analog Devices, Mr. David Zinsner. Dave, thank you so much for being with us here today.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Thank you, Stacy.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

So I do want to I guess start with a broader strategy question. What do you think the biggest strategic imperative for Analog Devices is from where we're sitting here today going forward?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Well, I think obviously what ADI does well is we focus on the intersection of the physical world with the digital world and where performance in some way matters either it needs to be high speed, it needs to have unbelievable precision, and it needs to operate under extreme conditions, areas where the problem is tough to solve in that alignment between the physical and the digital, that's really where we want to focus. And so I think even today it's still the same thing. We want to just maintain the level of investment and develop the right technologies to be able to address whatever the market needs in that space.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I guess what I'm asking more specifically, you've given in long-term EPS target. Actually on the last earnings call, the target used to be $4 to $5. Vince on the last earnings call said pretty clearly $5. Is that the end of deal of where you're trying to take the Company like how important is that EPS target in 2020, is that the goal?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

From a financial perspective, it's the goal. I think the way I view it more than anything and the reason we kind of put it out to Wall Street was give ourselves this kind of peak and where we wanted to be from a financial perspective and you obviously that was coming on driving the top line up, which last year we did $3.4 billion. I think back when we made that prediction, it was somewhere in that $2.5 million, $2.6 million kind of range. So we've made clear steps to get closer to the number that will give us that $4 to $5 number. And it's about just being very prudent in terms of how we manage the expenses and expanding the gross margins to help out. So it's definitely part of the goal. I think our strategy is about developing technology and growing the business. I think the $4 to $5, pushing ourselves to the $5 side is really the outcome of the strategy more than anything.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. Do you think the growth is probably the biggest lever that you have to get there? Currently, I think there is some room on the model, but you're in the ballpark of the operating model as it stands today. So I guess, could you give us a view? And you talk about how you have grown since you gave it. The growth was primarily though from acquisitions and from consumer wins, the rest of the businesses -- the core business as I think about it, it's been a little more challenge. I guess, could you give us a view on -- and I think you've talked probably about some of the headwinds that were driving that and how they may be kind of troughing at this point. Maybe could you give us a point of view on some of the drivers -- I guess two questions. The relative importance of the different drivers within the model in terms of growth versus margin expansion and then some of the areas where you actually do believe that the Company itself can actually return, ideally organic growth, or if not whether M&A actually needs to be a bigger portion of the quiver right now?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Well, clearly I think of all the levers we have, and we have -- we can obviously and we have been buying back stock and so forth. We have a variety of levers that can kind of drive us to the high end of the $4 to $5 range. But the Number 1 driver is definitely going to be the revenue growth. And as you point out, I think the growth really came more in the consumer space lately, not so much in the other markets, communication, industrial and automotive. But there were various kind of idiosyncratic reasons why those things, for example in the comp space, it was -- China is kind of slowing down there, capital spend that's resumed, in the auto space, we'd kind of exited something that was a more commoditized part of the market. The growth is going to resume there. In fact, we will have year-over-year growth next quarter. And even in the industrial space, we are faced with a little bit of a macro headwind that looks like its troughed. We should have year-over-year growth in the industrial space. So I think we just without doing anything, I think it's kind of naturally moving towards what we call the B2B space, is moving towards kind of a growth dynamic to it. And then on top of that, there are very specific areas of that B2B space that I think have really good potential. In industrial space, we're focused a lot on smart machines type markets. We have a great business in the military space and that business has been growing well. We have a number of key wins in the healthcare space that will start generating revenue in the kind of 2017, 2018, 2019 kind of time frame, which drive very good growth.

The auto space as I mentioned that is commoditized. There are a lot of good verticals in that space. In the infotainment area, we're seeing very good growth. Matter of fact, all the other markets outside of the area that commoditize, which was the passive safety market, have actually had double-digit growth. So, the passive safety is kind of I think leveled off at this point and the other markets should carry the automotive business I think to grow very close to where it had historically grown before we had ran into the headwind. And then the comp business, it does have kind of ebbs and flows to it, but we have better market share in the comps business. Going forward, we will be better positioned in 5G for sure than 4G, but even on the 4G side as technology integrates, we should be gaining share. On top of that, the small cell market in the comp space looks like a pretty good opportunity for us. I think we have a very strong position there. So I think there are a lot of -- and that's the beauty of the analog model, it's never one thing. And that's the benefit to us, but the challenge to communicate it is -- it's like we make a lot of bets and it's a diversified model, and the idea is that we're not quite sure whether all of those bets will work out, but enough of them should work out to give us a pretty easy growth rate I think.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I think we've had these arguments before. When I sort of work back from your kind of EPS target, I get a topline growth number that's in the ballpark of 10%. That's what kind of be required, at least at the midpoint of the margin ranges in order to get there. Is that the right way investors should be thinking about it? And if that's the case, can we do it organically, or does M&A need to be a factor?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I do think that we do have a path to getting to the higher end of the operating margin range. I think there are good opportunities on the gross margin side. Matter of fact, this quarter, we'll bring our utilization down, just to get our inventory more in line and we'll still keep gross margins flat, because we took out a decent amount of expense on the manufacturing side. And there are more opportunities to do things like that. So I'm pretty confident we can get to the high end of the gross margin model.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Which is it 69%?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I think it is 68% actually, and moving up. And then on the operating margin side, it's a lot to do with leverage. But I think there are some efficiencies we can still get out of that model, or that part of the model as well. So I feel pretty good that we can get to the kind of more to the mid -- upper-mid, call it, of the operating margin range which would kind of put us in the 35%, 36%, maybe even 37% range on the operating margin. So that would be a component of it. So that kind of reduces, I guess the stress on the top line side.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

But it's still probably 8%, 9%.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

That's right. It's still probably in 8%. I think probably organically this business grows more like 6%, on a five-year basis. So to get to the higher end of the range, probably does take a little M&A. And I don't think we do M&A for the sake of trying to hit a model. But I think there are things that we do want to in our portfolio that we don't have today that my guess will be accretive, both to the revenue side and to earnings side. And you have what four or five more years to go. So I would be surprised if we didn't find a couple of those things that would augment it. Hittite actually -- of course there aren't a lot of these kind of high-performance analog companies out there, but Hittite did wonders for us. It added $300 million plus to the top line side and was probably accretive in the kind of mid-teens, maybe even upper teens at this point.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Do you think there is enough opportunities out there even if you're not going big on M&A, but like small to mid-size with an appropriate margin structure as well to keep you within that model?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Yes, I think we'll be okay. I would say that when we look at the gross margins and operating margins of businesses, we recognize sometimes when we acquire we're not necessarily going to get exactly what we want from a model standpoint but usually we can figure out a path to get it up. And even in the case, obviously Hittite had higher gross margins than we did, but we actually moved those gross margins up because we were able to take out cost both on the frontend and the backend inside. So their gross margins now are probably in the mid to upper 70s at this point. So that's kind of a model for us. So, even if we got something in the kind of mid 50s, I think we would find something as long as that has the same characteristics of high performance, there was a cultural alignment with what we did, what we do. I think we should be able to move gross margins on these companies that are smaller than us.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. I guess in that sort of operating model, how should investors be thinking about how the cash return strategy might stay the same or it might change?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Our goal is to give 80% of our free cash flow to investors. And the way we break that down is I'd say about half of that comes in the form of the dividend, it's more kind of guaranteed amount and then the other half is buyback and we kind of having flow-based on the dynamics of what the stock is doing. Last quarter, we bought a couple of hundred million back, I think the quarter before we made about 100 million back or something. So it kind of ebbs and flows, when you look at over a four-quarter, eight-quarter kind of horizon, and it should kind of match up with that 80%. And then the other 20% plus the cash on hand is I think kind of the use for acquisitions.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I have to ask, with the Hittite acquisition, you managed to use offshore cash. Is that something you think you can do again, if you need it to?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Well, what we did actually was -- where the borrowing occurred was actually offshore and then we paid the borrowing with offshore cash. And so both things were offshore. And that vehicle or that approach is based on our structure and the presence we have in Ireland. It allows for that. It's deal-specific and all the ducts have to line up, but it can be done.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I wanted to switch a little bit and talk about some of the end markets. First is just something you actually just mentioned. You said you have a number of health care wins that would be ramping in the 2018-2019 time frame. Can you give us at least a general view of the types of end-markets within healthcare that those might be going into and sort of relative size, like how -- you don't split healthcare out yet, it's still part of the industrial, but so was auto once upon a time, you got big enough. Like does healthcare get big enough up in that time frame to split it out?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It could be. I think when automotive was part of the industrial business, we actually captured it in the industrial business, I think it was kind of mid-single digits as a percent of revenue for the Company, but as we looked at the opportunity pipeline, how it was lining up for the next five years, that's the beauty of automotive. As you get pretty good visibility and same is actually true for healthcare, we can kind of tell where it was going, and we thought might want to break this out and give investors a better sense of how this business is behaving.

The healthcare business is right around the same level at this point now. It's in the mid-single digits as a percent of revenue, but the way it's lining up in terms of design wins and opportunities, I think pretty soon you could start to set an expectation that maybe it should be broken out. I think we probably will look at that. Largely when we've focused on healthcare in the past, it had been in what we call big iron, which were big kind of imaging systems like CAT scans and ultrasound, and those kind of things. It evolved to be more kind of portable vital signs monitoring type products, because the precision requirements are increasing significantly in that space. And other things that where performance matters like battery usage and so forth, or power usage is important. So when it's got hard connectivity problems, hard measurement problems, it has to be done in very low power environment, that's usually lines up for something that will be fairly proprietary and what gets developed. And those are the things that we tend to focus on. So in this space, those are kind of the areas we're focused on. And the big healthcare companies, I think are all pushing in that direction under the theme of IoT, I guess, and their definition of it.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I'll ask you about IoT in a little bit. Do you think people (inaudible) automotive and even now starting industrial, they talk about like some level of content increase or multiply, do you think there is something similar that plays out in healthcare? Do you have any sort of idea what the multiplier might be?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It's hard to tell, because I mean for some of these, there was no content and now there'll be content. So it's so significant, it's the change. But I would tell you that the peak revenue levels for these wins are measured in the tens of millions per year. And you'd stack up enough of those things.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. So within automotive, you talked a little bit about like the passive safety, the men's business that has kind of rolled off. I guess two questions, was there a change in the economics that in that business over time that sort of -- because it used to be a reasonably sizable player there. When do you see that change? And then I guess going forward, can you talk about the areas where you're investing and playing in automotive today, what do you think actually can drive the most? Because people talk a lot about ADAS for example and everything else. Where are you actually playing in the car that actually can drive growth and return it to the trajectory that it was on?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Yes. So just to add a little color to what we did that is commoditize. As we operate in the passive safety area, we provided men's basically accelerometers. Those accelerometers kind of recognized the stoppage of a car and then based on that right basically. And the level of performance was continually increasing. And in any market when the performance levels constantly improve, those are generally good markets for us. Sometimes that just continues or it stabilizes, sometimes they just kind of they go with good enough and they use kind of other systems and software to overlay on top of that to make it a more cost effective solution, and that's really kind of what happened in that environment or that particular part of the market. And so it really never was huge in terms of its ROI, but it really started to get tough.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

How big was it at its peak for you?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It was -- I don't know, probably like $170 million or something like that. That was pretty big. So anyway, there are certain parts of it that still do have performance and we are actually winning new customers in certain areas that really want the performance, but there is a handful of customers that just don't really value it. And at some point when we see that happening, our model is -- if that's going to happen, we just walk away from it. We would rather focus on the areas where performance does matter. So that's what kind of happen in that that part of the market. And so then where we shifted a lot of the R&D was into three main parts of the automotive space. The first which you mentioned and it's the other side of the safety market is the active safety market, ADAS. And in that environment, that performance does it really matter. And the beauty of the acquisition of Hittite is we get a whole lot of microwave technology, which is really where we play in ADAS space, with 24-gigahertz microwave. It's going to move to millimeter waves 77 gigahertz. And as it moves to that, I think we even have a better position to gain share. So, I think, we have a great position now but I think the opportunity to even be in a better position in the 77 gigahertz which probably won't happen until 2018, 2019 probably too. Looks very strong. And on top of that just ADAS itself is proliferating. And as it proliferates, that's where -- into more and more cars, that's where we also get a lift.

The other two markets we focus on are infotainment. We do a lot of audio products in infotainment. We just announced in the first quarter a partnership with Ford on what's called A2B, which is a way of distributing audio through the car and really take out a lot of the cabling and stuff lower the weight of the car and actually to make it easier to network that hold all the audio stuff together. It's gotten great traction, I'd say almost every automaker every OEM is interested in discussing with us. So I think we'll have really good share in that market with this new technology. And then on the Powertrain side, we have kind of a holy stuff, just we call it traditional kind of powertrain stuff, but more and more of the things that were being done mechanically are going to shift over to being done with semiconductors like magnetic resistance right now is a mechanical thing for the most part, but it's shifting over to what's called the MR, which is soft and silicon. There is a battery sensing for electric vehicles and so forth that all has to be done now in silicon. So just increasingly as more cars get more sophisticated in terms of electronics and electrical, and trying to take weight out of the car and get rid of all these mechanical devices, there's just a steady kind of stream of opportunities in that space.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

So, the A2B audio, can you give us a ballpark estimate of the kind of content we're talking about? I think more broadly, can you give us an estimate of what you think your content overall in an average automobile is?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It's so hard to say, because it's all based on configuration, but it ranges anywhere from -- just broadly, it ranges anywhere from a couple of bucks to well over $100 per car. The A2B depending on whether they kind of DSP capability and all that stuff, it could be up there in the higher end of the range actually with DSP.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

In terms of the dollar content, that solution could be $100?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

The solutions with DSPs and all that, it has to be.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Okay. I want to ask about IoT. It's been coming up a lot in a number of discussions. I'm going to start with, how do you define IoT? What is ADI's definition? How do you actually think about?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Stacy, that's actually a really good question, because in some ways, like internally, we don't have a business called IoT. We don't run a P&L called IoT. I would say that our customers do want to marry the data that they can collect out of the physical world and get it to the cloud, and then provide analysis. Their value and this is providing information back to their customer. What I think we do particularly well, which really is an evolutionary thing that's been going on for probably since our existence, but even in the more sophisticated way or at least the last 10 years, is we provide that ability to collect the physical information, convert it and connect it. And that's what we do, that's all we do. And so I guess that's how I would define how we think about IoT, but it is basically how we define our Company. That's exactly what we do. We're not interested in providing devices that people wear around their wrist all the stuff, or even in the industrial side we're not interested in providing a complete network system to cloud saying that because that's what our customers do. But where they have performance issues, performance challenges I should say, where they want to get this information and really harsh environments and you get it up to the cloud, and in some ways do some control at the edge, that's where we provide the capability to do that.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

It sounds like you don't really view yourselves as having a need in helping customers develop use cases business models analytics, the applications sort of running, do you actually see the value within the semiconductor itself, is it --?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I think, to us -- there's probably -- clearly as a part of the market that where all of that stuff is easy to do and I think it's a lot of these kind of more consumer-oriented things, but there is a whole other side of this market where collecting that data in the physical world and doing some sort of control and connectivity it's actually pretty hard to do and that's where we add value and that's where we focus.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Do you have all the connectivity that you actually need?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

One way or another. Obviously we have a lot of connectivity, because on a B2B basis we have probably one of the richest portfolios connectivity in RF and microwave in the industry. There are these kind of more standardized type connectivities like ZigBee and industrial Bluetooth, and so forth, those are licensable. And that's how we address that.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

If I could shift gears to the industrial market, it sounds like many companies are seeing we want to hope it's some sort of nascent recovery. We're not quite sure. Mostly what we heard is kind of things are not great, they're kind of weak, they are not really getting better, but they're not necessarily getting worse either. So we've been kind of bobbling along here on this low level kind of macro-driven for a while. Is that still what you're seeing? It kind of more sound like maybe you were starting to see at least some (multiple speakers).

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Maybe I am a little bit more optimistic than that. The thing about industrial, that's measured in 10-basis-point increment turns a lot different, it could be -- but I think year-over-year, we should have growth in the industrial business in the third quarter. I think you can take some positive out of that. We had good sequential growth in the second quarter, it was up 11% from the first quarter. So, I do feel like it has bottomed and it's on a kind of maybe very slight recovery at this point on, but it's by no means at this point robust.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

You are still running well below kind of peak levels of -- which were driven -- I can't remember which natural disaster drove it, but there was a pull forward.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It was the earthquake and tsunami.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

It just seems like. I know something happened if that was all just inventory worked under this seems like a lot over something else that happened under the covers maybe something similar to what we saw in automotive that took some of that volume away. Do we see anything like that? (Multiple speakers).

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It was nothing like a share thing, but it was definitely -- there was to us at least, we do have a pretty heavy exposure to companies who ultimately sell into the oil and gas base. So I think that did affect us a bit. So that probably had some effect on us. And then depending on your measurement period, we also have a decent exposure in to ATE, and beyond to semiconductors and pretty pervasive and so. That market has good quarters and bad quarters all the time, and so that obviously has an effect as well. But I'd say generally it's a very, very broad, it must be 80,000 customers in that space.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

The oil and gas statement and energy statement, I never really -- I don't think most investors think about ADI as a company that has a lot of exposure in that space. Can you give us a ballpark as to where your exposure is?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I can't. It's just a guess, but obviously we sell into Honeywell and those kinds of guys. It's those guys who then -- like for example, we sell a lot into safety products into a lot of these customers, a lot of that safety stuff ends up getting purchased by their natural resource companies. And so when they aren't expanding or shutting things off, they stop buying any of that stuff that replaces their old things. And it was more that affect than anything.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

But you're too far back in the chain to (multiple speakers).

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Really, really far back.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

What are you seeing in China now? Because that's again is one driver of some of the softness that we've seen it again. There is some hope that maybe we're seeing some recovery (multiple speakers).

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

We had a good quarter. Actually, we had a great quarter in the first quarter for China. It was up a bit again in the second quarter. I was actually -- funny, I was just on the phone with the guy that runs China for us last night, and he said things are plugging along. Our China business is really two markets for the most part, it's industrial and it's comms. And comms was suffering a bit last year because of this whatever it was, stoppage of capital spend for a while. That has recovered. We're back on recovery and they are also starting to deploy small cell technology, which is kind of fantastic for us. So that looked positive, but he also said industrial business is plugging along. So we've seen really no weakness at this point.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I guess on the comm front, this is the second or third time you mentioned small cells. Obviously the content of the small cell is going to be worse than the base station, but there'll be a lot, more them presumably. Can you give us a bit -- how much of the comm business today is small cell versus macro? And like how do you see that mix trending?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It's a mitt right now, I mean it's really small. There are a couple of carriers that really see small cell as their way of densification. There are other carriers that don't see small cell as a meaningful part of their densification strategy. I think it's China Mobile in China, I think Verizon here, they actually have some interest in really helping out their network off load a lot of their data to the small cell. So they'll be big players in it but others won't. So my guess is, even if you look out to 2020, it's still not going to be more than 15%, 20% of our wireless exposure.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. So lots of growth, but off of a --.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Of a small base. Yes. I just look at it more like a lot of this stuff in the small cell side is done with an integrated transceiver. So, integrates everything onto a single IC and that technology is actually finding its way back into the macro side, that's how radios are getting -- the requirements around radio technology are getting solved through integrate transceivers at this point on the macro side because of how the small cell kind of developed. So it's more of a catalyst for I think a position for ADI for the entire network more than anything.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I want to switch to the consumer side now. That's been sort of one of the bigger revenue source, also was a bigger controversies over last year. I was wondering if you could comment a little bit on your rationale for getting into the business because there seems to be a bit of the distance between what may be good for your business at least in the near term what has been good for the stock.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I would say that -- at the end of the day, we're trying to generate as much cash flow as possible. We have various constituents to concern ourselves with, but as it relates to shareholders we're worried about generating cash flow. And as long as something checks the box on -- is it high performance, is it a proprietary, does it have some legs to it, will we get a good ROI, will it generate good cash flow, as long as it does I have to say we're probably agnostic to the market for the most part.

And obviously when it's in the consumer space it gets a higher degree of scrutiny, because a lot of times you think you're getting those boxes checked when you're not getting those boxes, but I think in this case we felt pretty confident we were, so I recognize that it has more volatility than some of the rest of the businesses. But in times when the other businesses, ones that were less robust shall we say, that one is the one that carried the range for us. So I think it actually worked in the sense that it was part of the diversification of the model and it drove growth when the others didn't. So that's basically our strategy and we kind of stick to it. I would tell you that we didn't spend that money, all the operating cash flow from that business really fell to the bottom line. It was a very minimal R&D investment.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

That was our next question. This was a product that most of the investment was done for other things and it was re-purposed. So the ROI should have been incredibly higher.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

It was huge. And it was part of a big chunk of the $1 billion we returned over the last four quarters. I think it worked for everybody quite honestly.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Do you think this is, I guess a space you would seek to expand with other customers, or or was this designed for the single customer at this point?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Well, this one was designed really with the single customer in mind. And there is kind of an alignment with what the customers -- the customer had put a lot of wrapper around this technology in order to make it work in their environment. And in order to provide it to other customers for one, we probably have to do all that other stuff which that would be a different level of investment. We're not interested in doing that. I do think there are pockets of consumer that still do check the box on all these things around proprietary and performance. And we will selectively find the ones that we think have the highest probability of success. And I don't know what that means for a consumer, whether it probably isn't the percentage of revenue that it was last year, but can it be more than 10%? It's probably somewhere in between where it ultimately kind of leveled off.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

And I guess tactically with this customer that you had talked about, I think you talked about content increase. Was this related to the current product, which is the Force Touch, or is it related to something else?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

They were different things. I guess pretty good performance on our part in terms of getting the technology out and ramping it. They did open up a bunch of other things to us that they thought were tough problems, they wanted to see if we could solve. We didn't take all of them. We just picked a few of them and said okay, these ones we think have the best opportunity for return for us and probably align better with our capabilities, and so those are the ones we've chose. And as it turns out, those all ended up in the next generation of the product. So it actually worked out. So in the consumer space, there's -- analog in general ASP's erosions actually not that high, but in this one, it's a little bit more than probably the average, but the great thing was, we got a bunch of additional opportunities and things that are still, I guess, human interface related but different in terms of their functionality and what they do and that allowed us to get an ASP to actually increases from where we -- these bomb increases from where we were reporting to the customer.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Maybe one more question on this. Any lessons learned in terms of managing this channel?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Well, I would say, like I said, the revenue thing, I would say it wasn't that much of an issue. Even in the first quarter when it fell off like it did, our operating margins, I think were 28% that quarter. So I think when I got here, our peak operating margins you mentioned were 24%. So it seemed like a pretty good outcome. The thing that I felt was a little disappointing was that we had to write down some of the inventory like we built too much, and then it was actually a pretty meaningful amount of inventory that we had over-built. And I think the lesson we came away with was that everywhere along the supply chain from the first person at ADI that starts wafers, all the way through our process, all the way through their processes to the ultimate customer there is buffer built in. And so you don't need to build a whole lot of your own buffer to compensate for that. So, we have definitely kind of wrung it out of there in terms of how we build on a go-forward basis. I think ultimately those wafers are going to -- the ones that we've built, we ultimately going to find a home for anyway.

So we'll see how that goes. And certainly if we end up selling our product out at 100% gross margin, we'll isolate that, and not everybody, investors will really understand that, but I think even you if we do find out, it's still wasn't great that we built inventory quarters before we really needed it as it turns out. So that was the biggest lesson.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I think more generally you guys have talked a little bit in the past about increasing importance of doing integrated products. Can you talk a little bit about how you define that and view that, and how do you characterize ADI's ability to develop those products, and importantly to actually get customers to pay you that additional value to do that development?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I think really it starts with why is that actually happening. So, the main thing that drives this is customers themselves are hollowing out their engineering resources on the hardware side to focus on the software side. And as a result, they can't spend a lot of time trying to figure out all these components and how they need to sit on a board, and then some of the algorithms that have to be layered on top of that, and they would normally have to write those algorithms. So what they're doing is they're pushing us to do more of that. The challenge is not to get kind of pulled into an ASIC model where you're doing these one-off things for one customer that you can't leverage to the rest of the market, because if you do that it's hard to make money doing that, because a lot of companies have found out that the focus on the ASIC. So what we do is we try to create a platform out of anything that we're doing so it has broad applicability.

We tried to layer on an ability to kind of make them software-defined in a way that the customers can kind of tweak the parameters themselves to optimize the system for themselves. But that can all be done in the software as opposed to hardware. So it's not like we have to spin different parts for different customers that have unique characteristics. And I think when you do that, you can get really good return on it. And then ultimately obviously you've got them to pay for the additional amount, but I think that is where ADI is actually very good. We developed this algorithm that basically does the Digital Pre-Distortion in comms. And if they take the algorithm, they actually pay almost I think it's almost twice as much as they would pay for the hardware because it takes up so much hardware for them. They obviously see the value in it, but ADI does a good -- the market guys do a very good job of recognizing the value of the product they are providing, and making sure we get a fair return for that.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Have you been doing more than -- I know when Jerry was there, he talked a lot about increasing efforts to do value pricing, for example. This was something that maybe had not been pushed as much as it could have been. And that was definitely, is there something you continue doing win increase focus on?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Yes, it's a big component. Actually, there's a whole initiative partly that actually I managed around pricing and how to drive more just to pay for the value of the things we provide. Like one of the hidden ones that I remember Jerry saying this like he went to a customer and the customer said, we're still buying a part from you from -- I can't remember the exact year, I think it was 1978, and Jerry, went, really, we would hate it (inaudible) like that part. And Jerry walked out and said, wait, we can get paid for that. And so we're finding the things that really drive our value and trying to extract as much return for that value as possible and that's one of them. We don't end up like parts generally, and so people really like the fact that they can buy a part from 1978.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

(Multiple speakers) was 5%, so the products are 20 years old.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I think the very first temperature sensor we ever developed we're still selling. I think it makes $15 million in revenue or something.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

What are you doing on the DSP front these days? I know that used to be a bigger business. It's not visible anymore in the (multiple speakers).

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

The problem is that a lot of this stuff is so integrated it's hard to even know what should be called. Like a lot of stuff, I think get lumped. At least from a market research perspective, gets lumped in the data converters, but it does all kinds of functionality. The DSP space what we try to do, we have a couple of cores I guess, you call them, what we call Blackfin and TigerSHARC, I think. And we just mainly leverage those cores and basically done derivatives off of it. And it's a decent business. It's been around probably the same as when we last reported it, was a few years ago. A lot of this stuff gets sold into the automotive space for audio solutions. So we definitely focus in the auto space, and then various parts in industrial space where they need, where we actually if we're going to build a solution, some of the control and processing needs to be done by us, we'll leverage that technology to do that.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. We've got about eight minutes left. I wanted to give you a reminder, if you have questions, now would be the time to send up, and then we'll make sure to leave room for that. I want to switch a little bit, -- I guess while we're waiting, if we kind of talk a little bit more on the operational side now and you talked a little bit about your free cash flow return targets and everything else, but I guess in terms of the balance sheet itself you're your I guess current levels of onshore cash both location and generation rates, do that support the free cash flow targets you are looking, or do you think you need to -- you've been taking on debt a little bit of time over the years to kind of offset that balance. So where do you --?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

What we generally do is we pay -- what we get in US cash flow, we pay in the form of the dividend. And so when we do buybacks, we actually are using cash that's offshore. Obviously, we can't physically do that because we would incur a cost to do that. So we generally used leverage on our US balance sheet to fund that and that's why we do have debt on our balance sheet.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

So you think that will continue.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Yes, absolutely. And it's not a huge amount any one year. In fact, what we did -- what we did last December was we put a whole bunch of cash on there, just we had a whole bunch of cash, I think we have $1 billion just the cash that we can then use to fund the buybacks.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

I guess the mix of the business has changed. Like how should investors be thinking about incremental -- investors think about incremental gross margins when they model. How should people thinking about how I guess incremental gross margins over the next five years might compare with where they were over the last five years?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Like the fall through piece?

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

The fall-through, because it seems like your margins have gone up over the last two years, and it seems like you're still suggesting there can be a little more of it.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

I think generally the rule of thumb has been spend about 80% gross margins on the fall through, and I think that's a pretty good rule of thumb. And then hopefully we can press it a little harder with some of that cost initiatives we've done with the general basic business.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

And it didn't seem like the consumer business was hugely margin delivered. Maybe like a tiny bit.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

That's exactly what I will characterize it.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

In general, how do you think about prioritizing your investments and process? Can you talk about like in areas where we're not getting paid anymore, we're pulling back, but in general I guess what are the factors that you use to determine whether a particular business or product line is a good use of resource? Is it just around the capability, you bring it around the margin structure, these rental customers are asking for?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Yes, I mean -- we do a strategic analysis where we look broadly at which markets we think have good opportunities, which don't. At the more kind of granular level, what we generally do is we look at each business and say is it growing, if it's growing then good, it's fine. If it's not growing, then we decide can it grow? If it can grow, then of course it probably gets funding too if it has growth factors. And generally, I would say everybody starts with is this proprietary. And if it's that, it's generally going to get good gross margins. And then if it is not growing, then a lot of those things end up being more kind of cash cow-oriented type products. And we kind of rank order them and there's always a demand that's higher than what we have to spend, and kind of lop off the ones we have the least amount of confidence in.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. And overall, what's the overarching metric that you manage? So like do you have a competitor who manages to free cash flow growth per share and that's however they get and that's all they care about? Is there something overarching that you're managing?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

At a business unit level?

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

In business unit, and even at a corporate level.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

From a financial metric perspective, we do look at the earnings level. And so, at the top level, we look at this $4 to $5 and trying to push to the higher end of that range. And at the business unit level, we look at their operating profit and they got to grow their operating profit. So they make the various trades off on growth and where that market sits in terms of gross margin and how much they need to invest in order to drive that growth. Ultimately, they try to drive their operating cash flow. And in general, that's actually a pretty good proxy for cash flow actually, which is why (inaudible) kind of an offset.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

One of the drivers of earnings has been tax. Tax rate is reasonable low. This is a function of where -- I know you guys, you do you have a very sizable offshore manufacturing and development, and other things, but is this how should investors be thinking about how that's -- because that's one of the I guess differences between you and some of your peers is your tax rate has been structurally lower. It seems like you manage that -- the overall tax strategy since you manage fairly well?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

ADI, long before I got there developed a relationship with Ireland and put a factory in there. A fair amount of our R&D is done in Ireland, a lot the management team is in Ireland. So we have a lot of presence there. That actually happens to be a country where the tax rate is -- where they are actually more business-friendly and kind of push the tax rate in order to drive business there. And so most of our international activity gets done out of Ireland and that kind of -- for the most part, it hasn't changed. I wouldn't imagine our tax rate changes much quite honestly from where it is today.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Would you ever consider taking on larger amounts of leverage and doing more on the buyback front, or buyback still driven -- I think you said you have an algorithm basically of the stock price, but why not doing something bigger?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

We could. And probably over time, we will have increasingly more leverage. I would say it's more of -- the problem is -- it depends on how you manage your portfolio, but there is a benefit to kind of dollar cost averaging, because you never know when the market will be too high or too low, and you're not quite sure whether you bought into a high market or a low market. So what we try to do is kind of watch the movements on a quarter-to-quarter basis. And as you pointed it's more algorithmic just -- at least from a historical perspective, it's on the low-end and we recognize that every year we'll be buying stock back, and overtime we will average out to be a very good price. And that's been our approach. As I point out, we don't have as this cash generates offshore, we actually have to take on more and more leverage to go do that. And so my guess is you'll see us have a higher leverage model over time.

But at the end of the day, we kind of conservatively run the balance sheet, partly because I think if we were going to do -- if we did want take on leverage in a more meaningful way probably would make sense to do that in the context of an M&A transaction as opposed to buyback.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

It doesn't appear that we have any questions. I don't know if that's good or bad, but I'll give your soapbox. We've got a little bit of time left. Why should investors buy ADI stock?

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Everything I said before. Yes, I'd just say that beauty of ADI is it's a very diversified model, has very high motes around it. Most of our products are proprietary. We actually don't have a part-for-part competitive part out there. And it has very low capital intensity. And so it just generate lots of cash flow and that cash flow is pretty well protected. I think even in 2009 when the downturn occurred, we generated over $400 million of free cash flow. That was our worst year. So, this is a business that as an investor, if you like cash flow story and a cash flow story that's consistent regardless of the economic cycles, ADI is the company to invest in.

Stacy Rasgon - *Sanford C. Bernstein & Co. - Analyst*

Got it. We are out of time. Thank you so much.

David Zinsner - *Analog Devices Inc. - SVP, Finance & CFO*

Thank you, Stacy.
