

Q1 2017 Earnings Call

Company Participants

- Brian M. Krzanich, Chief Executive Officer & Director
- Mark H. Henninger, Vice President, Finance & Director, Investor Relations
- Robert H. Swan, Chief Financial Officer & Executive Vice President

Other Participants

- Blayne Curtis, Analyst
- C.J. Muse, Analyst
- David M. Wong, Analyst
- John William Pitzer, Analyst
- Kevin E. Cassidy, Analyst
- Ross C. Seymore, Analyst
- Stacy Aaron Rasgon, Analyst
- Timothy Arcuri, Analyst
- Vivek Arya, Analyst

MANAGEMENT DISCUSSION SECTION

Operator

Good day ladies and gentlemen, and welcome to the Intel Corporation Q1 2017 Earnings Conference Call. As a reminder this conference call is being recorded. I would now like to introduce your host for today's conference, Mr. Mark Henninger, Head of Investor Relations. Sir, you may begin.

Mark H. Henninger {BIO 17653227 <GO>}

Thank you, Crystal, and welcome, everyone, to Intel's first quarter 2017 earnings conference call. By now you should have received a copy of our earnings release and the CFO commentary that goes along with it. If you've not received both documents, they are available on our Investor Website intc.com. I'm joined today by Brian Krzanich, our CEO and Bob Swan, our Chief Financial Officer. In a moment we'll hear brief remarks from both of them followed by Q&A.

Before we begin, let me remind everyone that today's discussion contains forward-looking statements based on the environment as we currently see it, and as such, does include risks and uncertainties. Please refer to our press release for more information on the specific risk factors that could cause actual results to differ materially.

A brief reminder that this quarter we have provided both GAAP and non-GAAP financial measures. Today we'll be speaking to the non-GAAP financial measures when describing our consolidated results. The CFO commentary and earnings release available on intc.com include the full GAAP and non-GAAP reconciliations.

And finally, I'd like to draw your attention to a change we've made to our guidance practices for the current quarter and full year. Beginning with today's earnings release for the first quarter of 2017, our business outlook will speak only as of the date of our quarterly earnings releases, bringing our practices in line with virtually all of our peers.

With that, let me hand it over to Brian.

Brian M. Krzanich {BIO 4634082 <GO>}

Thanks, Mark. The first quarter marked a great start to the year coming off both Q4 and full-year records in 2016. Q1 revenue was up 7% over the first quarter of last year, a record Q1. And operating margin was up 20%. It was another milestone in our transformation from a PC-centered company to one that powers the cloud and billions of smart and connected devices. Average selling prices, or ASPs, grew meaningfully across our PC, data center and IoT business, reflecting the market's demand for performance and our segmentation strategy, and our memory business set an all-time record revenue.

At our investor meeting in February, I outlined our strategy to make Intel the driving force of the data revolution across technologies and industries. I also detailed our top four priorities for the year: growing the data center and adjacencies, ensuring a strong and healthy PC business, growing IoT and devices, and executing flawlessly in memory and FPGAs. That's the framework we're using to measure our success throughout the year, and I'd like to take a few minutes to assess our progress so far.

First the data center and its adjacencies. DCG grew 6% year over year despite a headwind resulting from a 14-week first quarter last year. The cloud service provider revenue was up 18%. The comms service provider segment was up 12%. And enterprise was down 3%, while non-CPU adjacencies grew more than 20% across all of the segments. Data center microprocessor ASPs were up in total across every product line, underscoring the market's demand for performance to transmit, aggregate and analyze data. We're also on track for mid-summer launch of our next-generation Skylake microprocessor. Skylake delivers significant performance gains across a wide range of workloads.

For example, Skylake will include AVX-512 extensions that will deliver a 2x improvement in floating-point operations per clock over the current generation, a gain that will have an especially high impact on HPC and artificial intelligence workloads. And last month we announced the formation of the Artificial Intelligence Product Group, bringing together all of our AI hardware and software assets and all of our AI engineering expertise across the company into a single group to accelerate our development of a full stack of AI solutions, and explore novel approaches that will shape the next generation of AI products.

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Second, a strong and healthy Client business. Our annual cadence of product innovation, combined with a thoughtful segmentation strategy, continued to produce strong mix, which drove higher ASPs. This trend, along with our ramping modem business, drove revenue up 6% and operating margin up 60% over last year. Our expectations for the PC unit TAM haven't changed since we last talked with you. We're expecting a mid-single digit percentage decline in the unit TAM. Our ASPs, however, are trending ahead of expectations and are contributing to our slightly higher revenue expectations for the full year.

Third, we highlighted the importance of growing the IoT business as we drive, and benefit from the rise of billions of smart and connected devices. IoTG revenue was up 11% year over year, where we saw strength in our industrial, video and automotive segments. We also announced our intention to acquire Mobileye, a highly profitable, fast-growing leader in computer vision for advanced driver assistance systems and autonomous driving. The transaction will combine Mobileye's expertise in computer vision with Intel's expertise in high-performance computing, artificial intelligence and connectivity. Together we expect to be the global leader in the \$70 billion autonomous driving systems, data and services opportunity by accelerating auto industry innovation and delivering cloud-to-car solutions faster and at a lower cost.

And, finally, we emphasized the execution in memory and FPGAs. Our memory business grew 55% year over year in a tight supply environment, while Fab 68, our Dalian factory, continues to ramp 3D NAND production and is delivering outstanding product yields. We also shipped our first Optane SSDs for the data center and our Optane memory solution, which is available online now and in PC OEM systems later this quarter.

In our Programmable Solutions Group, revenue declined 7% over the last year after adjusting for acquisition-related accounting charges in the first quarter of 2016. The year-over-year decline was due to weakness in the data center and comm segment, partially offset by growth in industrial and auto and consumer. We also announced an important pilot program with Alibaba Cloud, the cloud computing arm of Alibaba Group, for our cloud-based FPGA acceleration service.

We're making good progress against our four top priorities for the year and our transformation goals. We're improving the profitability and health of our PC business. At the same time, our investments in the data center, IoT, memory and FPGAs are paying off with significant combined revenue growth. These are purposeful investments that will position Intel for years to come. At the same time, we recognize that there is an opportunity and a responsibility to be more focused and efficient as a company, a goal we can achieve without compromising our most important investments, our transformation or our future.

Focus was one of our objectives in establishing McAfee as an independent cyber-security company just weeks ago. And it is with efficiency in mind that we're making an important commitment to our owners today. We are establishing a spending target of approximately 30% of revenue, which we expect to reach no later than 2020. Following a 1 percentage point improvement from 2015 to 2016, we forecasted additional 1 percentage point improvement in spending in 2017 and we're now expecting to do a little better than that.

While we expect revenue growth to a play role in achieving these targets, hitting this goal will require spending discipline and an intense focus on our strategic priorities.

To sum up the quarter, we're off to a good start and executing well against our priorities. We're delivering a steady cadence of leading products, a powerful segmentation strategy and growing profitability in our Client business. We're growing our Data Center, IoT, and Memory businesses as customers see data as a competitive advantage and look to Intel as a partner that can help them create, analyze and unlock the value of massive and growing flood of data. And finally, we are committing ourselves to a set of important new productivity goals intended to create value for our owners.

With that I'll hand it over to Bob.

Robert H. Swan {BIO 1972621 <GO>}

Thanks, Brian. 2016 was a record year for Intel and 2017 is off to a strong start. We executed on several important milestones in the quarter. We delivered on innovative product and technology roadmaps across the business, Fab 68 in Dalian continued its impressive ramp, and Intel's transformation continued with the planned acquisition of Mobileye for autonomous driving and the sale of the Intel Security Group.

Revenue was \$14.8 billion, up 7% year over year. Operating income was \$3.9 billion, up 20% year over year, and earnings per share of \$0.66 was up 22% year over year. Our EPS performance was a result of strong top line growth and significant margin expansion. First quarter operating margin was 27%, up 3 points year over year, and gross margin came in at 63% up 0.5 points year over year. Direct spending came in at \$5.4 billion, flat year over year and down 2 points as a percent of revenue from 2016 as we continued to execute on our restructuring program.

Let me touch briefly on our segment performance. The Client Computing Group had revenue of \$8 billion, up 6% year over year. We continue to see the worldwide PC supply chain operate at healthy levels. Client ASPs were up 7% year over year as our segmentation strategies are paying off and core mix continues to be strong. This segment had yet another quarter of significant profit growth with operating profit growing over 60% from a year ago as the business continues to execute and benefit from continued improvements in 14-nanometer unit cost, richer product mix and lower spending, primarily from the Client business having a decreased share of technology development and SG&A allocations.

The Data Center Group had revenue of \$4.2 billion, up 6% year over year. The Data Center Group had operating profit of \$1.5 billion, down 16% year over year. Operating margin percent was impacted by increased allocation of technology development and SG&A costs, higher product costs as we transition to 14-nanometer and the ramp of adjacency products.

Our Internet of Things business achieved revenue of \$721 million, growing 11% year over year driven by strength in the industrial and video segments and continued momentum in

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our automotive business. Operating profit for the business was \$105 million, down 15% year over year from increased investments in autonomous driving and increased allocation of SG&A and technology development spending.

Our Memory business had record revenue of \$866 million, up 55% year over year with strong demand for data center SSD solutions and demand signals outpacing supply. We continue to make outstanding progress ramping Fab 68 with yields and unit costs well ahead of expectations. This segment had an operating loss of \$129 million, largely driven by costs associated with 3D XPoint and startup costs for our memory capacity.

The Programmable Solutions Group had revenue of \$425 million. Operating profit was \$92 million, flat year over year after adjusting for acquisition related impacts.

Our Intel Security Group business had revenue of \$534 million and operating profit was \$95 million. Consistent with our prior guidance the Intel Security transaction closed at the beginning of the second quarter.

Let me remind you of our capital allocation priorities and our progress. First, invest in our business, second, strategic acquisitions and third, return cash to shareholders through dividends and buybacks. In the quarter we generated \$3.9 billion of cash from operations. We repurchased \$2 billion in capital assets, paid \$1.2 billion in dividends, increased the dividend by 5% and repurchased about \$1.2 billion of stock.

In addition, we generated approximately \$400 million from the sale of some of our interests in ASML, which generated \$235 million of pre-tax gains. At quarter end, cash other long-term investments was \$23.7 billion, up \$600 million. Total debt was \$25.8 billion.

Today we announced an increase in our share buyback authorization by \$10 billion. Currently, we have approximately \$15 billion authorization. We expect to continue to offset dilution from our stock-based programs and opportunistically reduce our outstanding share count over time.

Now let me turn to guidance. First, some context. First, while we see strong momentum and Client ASPs contributing to slightly higher expectations of revenue for the year, we continue to take a more cautious view of PC consumption versus third party analysts. We feel great about our annual cadence of product innovations with new product launches planned this year including Skylake for data center, eighth generation core, 64-tier 3D NAND SSDs and further extensions to our Optane product line.

Second, we continued to see strong demand signals in our memory business through the year and our Fab 68 in Dalian ramping to be able to supply higher demand levels. Third, the Data Center business has solid momentum with the mid-summer launch of our next-generation Skylake processor. And forth, as I indicated earlier, we completed the sale of the Intel Security Group. We expect to realize a pre-tax gain of approximately \$375 million and a tax liability of approximately \$850 million. This results in a GAAP tax rate of 39% and a non-GAAP tax rate of 21% in the second quarter.

And last, as Brian talked about earlier, we are committed to increasing efficiency as a company and we are making an important commitment to our owners today. We expect to reduce our spending as a percent of revenue by 2 points from 2015 to 2017 and our plans are to continue to drive efficiencies in how we operate the business over time. We are establishing a spending target of approximately 30% of revenue which we expect to reach no later than 2020.

As a result, we are raising our full-year revenue guidance by \$500 million to approximately \$60 billion and our EPS guidance by \$0.05 to approximately \$2.85 per share. As we look to the second quarter of 2017, we are forecasting the midpoint of the revenue range of \$14.4 billion, up 11% year over year excluding Intel Security and up 6% including Intel Security.

We expect operating margins to increase by 3 points year over year, gross margins to be up 1 point at approximately 63% and spending to be approximately \$5.2 billion, flat year over year. We expect our spending as a percent of revenue to be down 2 points in the first half of the year versus last year, as we make solid progress in increasing efficiency in the company. We expect EPS to be approximately \$0.68, up 15% year over year.

We feel pretty good about where we are 90 days into our three-year journey. We exceeded our expectations for Q1 and increased our profit expectations for the full year. At the same time, we are investing in the future by expanding our TAM from \$45 billion to \$220 billion. We are already seeing an impact, with our growth-oriented businesses up double digits collectively as we continue to transform the company from a PC-centric company to a company of smart and connected devices that power the cloud.

With that, let me turn it over to Mark.

Mark H. Henninger {BIO 17653227 <GO>}

All right, thank you, Brian and Bob. Moving on now to the Q&A. As is our normal practice, we would ask each participant to ask one question and just one follow-up if you have one. Crystal, please go ahead and introduce our first questioner.

Q&A

Operator

Thank you. Our first questioner comes from Vivek Arya from Bank of America Merrill Lynch. The line is open.

Q - Vivek Arya {BIO 6781604 <GO>}

Thank you for taking my question. Brian, I'm curious on the Data Center growth. The growth rate is now below 6% in Q1. Are you still committed to the high single digit growth rate for this year? What will drive it? Is it just some pause ahead of the broader launch of the Skylake servers? If you could just give us some more color about why the growth rate

is below trend right now and what will help it get back to trend later in the year and over the next few years.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure, Vivek. So the simple answer is absolutely, we're still committed to the high single digit growth for the year. If you take a look at it, as Bob and I both mentioned in the call, when you take a look at Q1 comparatives, one, Q1 of last year was 14 weeks. This year it's a normal 13 weeks. So you add that one extra week; that's a couple of percent that you're competing against in a year-over-year basis.

Secondly, Q1 tends to be our lowest quarter in general if you just look at our seasonality in the year for overall revenue and output and growth in the Data Center business. And so as we look out and we see, as you said, the ramp of Skylake in the second half, as we see the normal seasonality, we are absolutely committed to that high single digit growth rate for the rest of the year.

Q - Vivek Arya {BIO 6781604 <GO>}

Okay. Thanks. That's helpful. And as my follow-up, the very rich mix in PCs, ASPs were up very strongly. How sustainable is that? And are you seeing any effect of competition from AMD's product launches?

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure, I'll start. Bob, you may want to jump in. Each quarter we come in here and say we're a little concerned about the sustainability of those high ASPs, and we continue to have that, so we always forecast. If you take a look at what we've forecasted for the remainder of the year, we've forecasted a slight decline in ASPs as we move through the year. Now, that said, we're continuing to improve our road map. We're continuing to pull in products, and the demand for those high-end, high-performance products, from 2-in-1s, gaming, high-end workstations, continues to grow faster than we are even able to project.

So right now we've forecasted a slight decline through the rest of the year, but we had strong demand for it in Q1. And we really believe that's a function of our products and our roadmap. From a competition standpoint, we're not seeing anything unusual right now as far as - there's always some level of competition in this market, and I'd tell you for Q1 and our forecast for Q2, we're not seeing anything out of the ordinary from what we normally see.

A - Robert H. Swan {BIO 1972621 <GO>}

Yeah, the only thing I would add, Brian, is with the ASPs being a little bit stronger than we expected in the first quarter, as we mentioned, we expect full-year revenue to be up \$0.5 billion, versus where we were 90 days ago, and I would say one of the contributors to that is how we saw ASP trend in the first quarter of the year.

Q - Vivek Arya {BIO 6781604 <GO>}

Thank you.

Operator

Thank you. And our next question comes from C.J. Muse from Evercore. Your line is open.

Q - C.J. Muse

Yeah, good afternoon. Thank you for taking my question. I guess first question, in terms of your targeted 30% OpEx ratio by 2020, would love to hear what kind of revenue assumptions you're making as part of hitting that.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure. So I'll start. First I thought it would be good to give you a little background, right, why do we come out and commit this now, and what's our thinking behind this? And part of it is we had good progress, brought down spending as a percent of revenue about 1% for 2016. We're a quarter in, and we're seeing good progress in our efforts along 2017 of taking it down another slightly more than 1% as we look at this year.

And so we just really took a look at, do we think we can maintain that progress and continue to drive efficiencies while driving growth. The growth we've expected is what we talked about in the analyst meeting back in February, which is that mid-single digit type of growth for the overall company, and that's kind of where we're at from a growth perspective. And then the cost reduction and efficiencies are driving the rest of it.

A - Robert H. Swan {BIO 1972621 <GO>}

Yes. And I would just say that our focus is on growing the earnings performance for the company in the short, medium and long term. And what we laid out at Analyst Day, as Brian indicated, was over the next three years, low single digit growth, operating income growing faster than revenue and EPS growing faster than operating income. Against that, we're trying to obviously make revenue grow faster, continue to manage the efficiency in which we operate the company and drive strong earnings growth performance over the short, medium and long term. So the 30% target is consistent with kind of the three-year plan, and we know that there's opportunities for us to be more efficient as we go forward.

Q - C.J. Muse

That's very helpful. I guess as my follow-up, was hoping to take a look at Memory. And here would love to hear from you as to how we should think about layering in depreciation from Dalian this year next, and when you would expect to turn a profit on the operating margin line.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Yeah, on the depreciation, we kind of implied in our guidance really no change on our depreciation through the course of the year, and what that assumes is roughly \$2.5 billion additional CapEx from Memory in the year. In terms of profitability for this year, when we talked to you at Analyst Day, Rob kind of laid out a plan where the core 3D NAND would be profitable in the second half of the year, but our losses for the business would still be roughly in line with where we were in 2016. And that was a function of really three things,

good performance on 3D NAND, continuing to ramp Dalian and continuing to invest in our Optane product or 3D XPoint. So those dynamics have us breaking even for the core business in the second half of the year. We said that near the end of 2018 as a whole, the Memory business would be profitable. And to the first quarter, growth was stronger than we expected and performance out of our fab was even better than we expected.

Q - C.J. Muse

Thank you.

A - Mark H. Henninger {BIO 17653227 <GO>}

Thanks, C.J.

Operator

Thank you. Our next question comes from Blayne Curtis from Barclays. Your line is open.

Q - Blayne Curtis {BIO 15302785 <GO>}

Hey, guys. Thanks for taking my question. I just wanted to go back to the DCG growth and into your outlook in June, flat or slight growth overall. Is your expectations of the DCG would be similar to that? And then as you look out the whole year, you talked about cloud growth. I know tough compares, but 18%. Just curious, since you've been shipping early to these customers, what would be the timeframe that you would actually see some benefit from Skylake?

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure, so I'm not exactly sure I completely understood your slight growth. What we said is for DCG as a business, we're in the high single digits growth rate, so we're absolutely committing to that. We talked about the 6% in Q1 and how, as we go through the year, we'll continue to grow.

From the standpoint we've been sampling Skylake to the cloud guys now for some period of time. In fact, back into the latter half of last year. But you really don't see the ramp of Skylake in volume at any of the customers, whether it be the cloud guys or the rest of the enterprise and networking and all until the second half. That's really when the volume kicks in on the server side, and that's absolutely what we had forecasted and there's no change in that forecast whatsoever.

Q - Blayne Curtis {BIO 15302785 <GO>}

Thanks. And then maybe if I could just ask, and I know you don't break it out any more, but just your view on your modem product this year and next, and if you could also maybe opine about your foundry strategy and opportunities there.

A - Brian M. Krzanich {BIO 4634082 <GO>}

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Sure, I can start with the modem and Bob can talk about - I'm not going to break it out financially. Bob can talk about, jump on top of this. But for us on our modem, it continues to gain momentum. We've talked about our one large customer, but we continue to get other interest in it. We are on schedule to bring our next generation modem into production in customer qualifications this year and really looking out over time. We have the next several series of modems over the next few years from an LTE perspective.

And then we're already working on and believe we're leading, if you looked at our output for the MWC back in February as well, on the 5G side which is both at the modem and back through the base station. And that, we believe, is really the differential that we're able to provide in the communication space is in a space like 5G where the modem and the base station and backhaul is so integrated and so important, we're able to provide that end-to-end solution.

From a foundry perspective, we continue to talk to several large customers and as we're able to, we'll talk about volumes and launching of new products. But for right now we're just saying we're continuing to invest and grow that business.

A - Robert H. Swan {BIO 1972621 <GO>}

Yeah, and the only thing that I would add is the strong CCG revenue growth of 6% in the quarter. As you'll remember, because our first launch client really didn't ramp until the second half of last year, the first half revenue growth for CCG will, particularly because the modem will have a relatively easy comp. So that's a contributor to growth in the first half, and as Brian said, the comps get much tougher in the second half because our one client launched in the second half last year, but given the product we have, we feel relatively good about where we are.

Q - Blayne Curtis {BIO 15302785 <GO>}

Thanks.

Operator

Thank you. Our next question comes from Stacy Rasgon from Bernstein. Your line is open.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Hi, guys. Thanks for taking my questions. First, I wanted to ask again about this 30% spending target. You guys just had an Analyst Day like two months ago. It seems like something that probably should have been talked about then. So what's changed in the last two months that means you need to roll the target out on today's call? And how should I try to reconcile that target with some of your other commentary at the Analyst Day where you were fairly gung ho about the need to invest to find growth?

A - Brian M. Krzanich {BIO 4634082 <GO>}

So I'll start, Stacy. I think you have to take a look at where we're at. You're kind of asking a couple of questions. So first, from the growth standpoint, our position about investing and

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continuing to really drive growth is absolutely still just as strong as it was back in February at the Analyst Day. And I'd tell you Q1 is a great example of that, with year over year growth, another record quarter, coming off a record year and raising the year and forecasting another record year. So I feel very good about the investments we've made, both short term, medium term and long term to drive that growth.

That said, Bob and I have both been looking at, now how do we do that and also at the same time become more and more efficient. And what we've looked at now is that our performance and becoming more efficient in 2016 and taking about 1% out of our spending as a percent of revenue was very successful. We understand how we did that. As we looked at our first quarter performance and what we believe we can take out for the rest of 2017 is another percent of spending as a percent of revenue, slightly more actually.

And then I think one of the things that Bob's really brought in as the CFO is new ways of thinking and new looks at how to continue that trend. And so taking a percent a year or so out of our spending as a percent of revenue is something we think we can go and accomplish while driving that growth. And that is effort that we've spent over the last couple months, really digging into those details. And that's why we felt like it was important we came out now and really said, yes, we are committing to that. We understand the details behind it and we've got a history now that tells us we can say it with confidence.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Got it. For my follow up, I'd like to ask about DCG margins. So they were 35% this quarter. It doesn't sound like there was anything structural like the warranty charge that hit last quarter. This sounds like the drivers around allocation and everything else that you've discussed. But it's still quite a bit lower than I think most would have expected. How should we think about that margin profile trending through the year as the Skylake parts ramp? And do you think for the full year, you'll actually be within the Data Center margin targets that you provided at the Analyst Day?

A - Robert H. Swan {BIO 1972621 <GO>}

Yes, I would, Stacy, we kind of provided a long-term outlook of 40% to 45% operating margin for DCG.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Long term.

A - Robert H. Swan {BIO 1972621 <GO>}

Our expectations for this year were for growth, as Brian indicated earlier, high single digit and at the lower end of that range of the 40% to 45%. In the first quarter, just to be clear, the 9 point drop in margins, 7 points of that is attributed to the fact that DCG is a bigger business, and we've indicated it'll be the first on 7-nanometer and a fast follow on 10-nanometer. As a result, it gets a bigger share of our technology development and our

SG&A allocation. So 7 points of the 9% decline are simply a result of how we allocate cost to the business segments.

I think in terms of going through the course of the year, the things that are going to change, as Brian indicated, we got strong product offering coming out in the second half of the year. We expect ASPs to improve as we go throughout the year. As you know, the first quarter is always the lower end of margins from a seasonal perspective. And we expect product costs to improve as we continue the transition from 22 to 14 nanometer.

So it's in line with our long-term expectations. No change. Our outlook for 2017, no change. The biggest fundamental driver to margin performance is simply the success of the Data Center business in terms of growing, in terms of being a bigger chunk of the overall business, in terms of being a beneficiary of leading-edge technology. It bears 7 points impact because of the higher burden of our allocations on the business. So we feel good on where we are for the quarter and where we're positioned for the full year.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

But those allocation charges aren't going to go away anytime soon. It sounds like they're going to hang around for a while, if you're talking about 10 and then 7 nanometer.

A - Robert H. Swan {BIO 1972621 <GO>}

Yeah, that's true, and that's reflected in our 40% to 45% and our improvement throughout the course of the year.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Okay. Thank you, guys.

A - Mark H. Henninger {BIO 17653227 <GO>}

Thanks, Stacy.

Operator

Thank you. Our next question comes from John Pitzer from Credit Suisse. Your line is open.

Q - John William Pitzer {BIO 1541792 <GO>}

Yeah, good afternoon, guys. Thanks for letting me ask the question. Bob, maybe just to follow on to Stacy's question, just some clarification around the allocation charges. The 7 points in March, does that represent a peak? Or do we run into a situation where as absolute costs for 7 and 10 go up throughout the year, you could see op margins in DCG continue to be down just because the percent doesn't change but the dollars are going up?

A - Robert H. Swan {BIO 1972621 <GO>}

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Yeah, our expectation is the operating margins for DCG will improve by quarter throughout the year. Again, it will be a function of the normal seasonality of the profitability of the business. It will still bear a significant chunk of our tech development and SG&A costs, but you may remember that our development costs during the course of the year, as we indicated I think maybe last couple quarters, that comes down from first half to second half. So as that cost comes down, all of our businesses will benefit from lower costs.

And then the third thing, the real fundamentals of the business are higher ASPs with good product with outstanding performance and getting better and better yields on our 14-nanometer product going through the fab will be benefits to the profitability of the business. The lowest point Q1 expectations will grow each quarter throughout the year, and we would expect full-year operating margins despite higher absorption, higher burden from our indirect costs at roughly 40% for the year.

Q - John William Pitzer {BIO 1541792 <GO>}

That clarification's helpful. And then, Brian, as my follow-up, one of the strengths of your model is just the free cash flow that you can generate, which enables you to reinvest organically back in the business. And you're clearly doing it this year on the CapEx front with CapEx up over 20% year over year. I guess what I'm trying to understand is, should we be thinking of CapEx this year as sort of the new norm with rising capital intensity, investments in the Memory business, maybe optionality around foundry? Or is the \$12 billion this year sort of something that we should think about as being an above trend or particularly high spending year? Any color on that would be helpful.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure, John. I'd tell you that the increase in CapEx that you're seeing this year is something that we see as unique, but my guess is that we'll have to continue it for maybe one year more or so as we continue to build out that memory factory. But if you take a long-term view, I don't expect us to run these kinds of CapEx levels. We'll always make good investments, so in a place like this where we think we have differential technology like 3D NAND and our Optane/3D XPoint, I'm going to look for ways to invest that have a positive NPV. But from this current view, we probably have another year, and then probably go back down to what we'd consider a more normal rate.

Q - John William Pitzer {BIO 1541792 <GO>}

Thanks. Very helpful.

Operator

Thank you. Our next question comes from David Wong from Wells Fargo. Your line is open.

Q - David M. Wong {BIO 6109216 <GO>}

Thanks very much. Can you give us some idea within Data Center of what revenues you're currently seeing from Xeon Phi? And also you mentioned acceleration services at Alibaba.

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Can you fill us in on any other key customers adopting Xeon Phi, FPGAs or any of your other accelerators?

A - Brian M. Krzanich {BIO 4634082 <GO>}

Sure. So we don't break out revenue on specific products like Phi, but Xeon Phi does continue to ramp and grow from a product standpoint. We have some additional products that will launch in the second half of this year around Xeon Phi from Knights Mill. And from an FPGA or other accelerators, we continue to get several of the large cloud providers, networking providers who are continuing to use our FPGAs.

But again, we don't break out on a by-customer standpoint, but we still are committed to our 6% roughly growth on the PSG business this year. Q1 was down just because of some unique - there was some extra buying in the latter half of last year around some cloud, and the networking guys are typically down in the first quarter. So it hit its forecast, but it's down year over year. We think we'll recover that as we go through the rest of the year from an FPGA.

And then as we go out through the second half of this year, the first of the products comes out in silicon from our Nervana acquisition which is another form of AI acceleration. We'll get that first silicon. We'll start to work with customers and you'll see that come in 2018 as an additional accelerator adding to our full AI portfolio.

Q - David M. Wong {BIO 6109216 <GO>}

Okay. Great. Thanks.

Operator

Thank you. Our next question comes from Timothy Arcuri from Cowen & Company. Your line is open.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Thank you. I just wanted to clarify your answer to John's question. So in terms of the \$300 million year over year burden on DCG operating margin that's due to the cost allocation, is that sort of a fixed number going forward? Or does that absolute number get better through the year?

A - Robert H. Swan {BIO 1972621 <GO>}

There's two dynamics on our total pool of indirect costs that are going on for the company. One is our SG&A indirect costs are coming down. Brian referred to that earlier about the progress we've made on direct spending overall coming down another 1 point plus during the course of the year. And second, our R&D cost particularly as it relates to Moore's Law for 10-nanometer and 7-nanometer goes up little bit. So during the course of the year, our overall cost will be roughly flat that we'll be allocating to the businesses. And DCG will get a larger portion of that than it has historically, roughly impacting the

business by 7 points because of its bigger size and because of the decision to have it be a beneficiary of Moore's Law sooner than it has historically.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Thank you. And then as a follow-up, so I just wanted to clarify, so the NSG, so you're expecting to still lose money into the first half of next year and is that what you're saying? Or you're saying that for the entirety of the year next year you'll be profitable. Thanks.

A - Brian M. Krzanich {BIO 4634082 <GO>}

So separate out again and remember we're making the large investments in Dalian, so from a pure 3D NAND perspective, we said it goes breakeven and beyond in the latter half of this year. So for next year, our standard NAND business will be profitable. 3D XPoint plus the Optane product is additional investments we're making. We said that that's in the second half of next year it goes to breakeven and the overall business does as well. We haven't gotten any more granular than that for right now.

Q - Timothy Arcuri {BIO 3824613 <GO>}

Thank you very much

A - Mark H. Henninger {BIO 17653227 <GO>}

Operator, we have time for two more questions.

Operator

Thank you. And our next question will come from Ross Seymore from Deutsche Bank. Your line is open

Q - Ross C. Seymore {BIO 20902787 <GO>}

Hi, guys. Thanks for letting me ask a question. Wanted to ask the first one on the OpEx side of things, and I applaud the 30% target. It's good to see that commitment, but I wanted to focus a little bit more on the near term. In the first quarter it was about \$100 million above what you had guided and the second quarter is a bit above what I expected too, especially given McAfee. So could you give us a little color on why it was a little bit higher in the first quarter? And where we are in the restructuring benefits and the McAfee benefits, if you can do anything to size either of those in the near term, that would be helpful.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Yes, I think first quarter, a little bit over. I'd characterize it primarily in the round. I think for first half, we're basically implying \$10.6 billion of OpEx and we're committed to our \$20.5 billion for the full year. So \$10.6 billion in first half drops to \$9.9 billion in the second half and there's really two primary drivers to that. One is, as you alluded, the exit of McAfee will be roughly \$300 million out from the first half run rate. And then secondly, just the completion of our previously announced restructuring programs will continue to bear fruit

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on lower OpEx in the second half of the year. So first half \$10.6 billion, second half, \$9.9 billion. McAfee exit, continued execution, and feel good about full year \$20.5 billion.

A - Robert H. Swan {BIO 1972621 <GO>}

And just a reminder, that \$20.5 billion takes another roughly 1%, slightly more, out of our spending as a percent of revenue. So that's all baked in.

Q - Ross C. Seymore {BIO 20902787 <GO>}

Great. Thanks for that detail. I guess my follow-up then switches to the gross margin side of things. It's staying solid, and I might be at the risk of a rounding error in this question as well. But considering that you raised your revenues and ASPs were a big portion of that, usually that's a pretty good follow through. So the fact that you're keeping the gross margin guide for the year flat at 63%, are there any incremental offsets to the goodness that the revenue and the ASPs would generate? Or is it, in fact, just rounding?

A - Robert H. Swan {BIO 1972621 <GO>}

I don't know if it's rounding or not. I'd say \$0.5 billion of revenue upside at kind of roughly gross margin dynamics of the business will fall through at an additional \$0.05 of EPS, so we feel great about that. I think the dynamics of more the business is in the second half. ASPs will improve for Data Center. As Brian alluded earlier, we've assumed that ASPs will decline a little for the Client business. And the fast growth of Memory and modem will have a negative mix impact on gross margins. So I think when we take that altogether through the year, we felt a fairly consistent 63% with all those puts and takes throughout to the course of the year. And Q1 was where we expected, Q2 consistent with Q1 and full year.

Q - Ross C. Seymore {BIO 20902787 <GO>}

Okay. Thank you.

A - Mark H. Henninger {BIO 17653227 <GO>}

Thanks, Ross. Operator, can you please go ahead and introduce our last question?

Operator

Thank you. And our final question comes from Kevin Cassidy from Stifel. Your line is open.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

Thank you for taking my question. Just on the capacity that you're building in Dalian, can you say what percentage increase you're getting? Or is it directly correlated to the revenue growth that you see in the Memory Group?

A - Brian M. Krzanich {BIO 4634082 <GO>}

Percentage. So, A, yes. The growth in the Memory business that goes through the rest of this year is largely driven by the ramp of the Dalian factory, along with some assumptions

around strong ASPs as demand continues to outpace supply in the market in general. And so if you take a look from here on, in fact 2017, but then as we go out into 2018 beyond, Dalian will continue to be the driver of growth of that business.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

I guess another way to phrase the question is, what's the bit growth? Most other memory companies give a projection of what their bit growth is.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Yes. I don't think we've actually ever given a bit growth, so that's not a public number. We can take a look at that for next quarter as to whether we want to start adding that to our normal distribution. But what we've always talked about is growth of the business from a profit or revenue standpoint and overall growth.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

Okay. Thank you.

A - Brian M. Krzanich {BIO 4634082 <GO>}

Partly because remember, more and more of that business will become things like 3D XPoint slash Optane. And bits will be a little bit different there, right, not all bits are going to be created equal. That's a very differentiating technology. It's really got performance of DRAM-like devices with NAND non-volatility and pricing in between. And so those bits are a bit different than, say, typical NAND bits, and I wouldn't want to just lump those all into a standard number. So we need to think about how we'd really go and present this to you if you want to think about it from a bit standpoint. And that, it's around 5% of the business this year. But as you go out into next year and beyond, it becomes a larger and larger percentage as we see more and more products, especially in the data centers, use the Optane technology.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

Right. And maybe if I could ask that question too of Optane. When would it transfer to China?

A - Brian M. Krzanich {BIO 4634082 <GO>}

We haven't talked about a transfer date to China yet.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

Okay.

A - Brian M. Krzanich {BIO 4634082 <GO>}

So that hasn't been made public right now. Right now, Dalian is 3D NAND.

Q - Kevin E. Cassidy {BIO 15420688 <GO>}

Okay. Great. Thank you.

A - Mark H. Henninger {BIO 17653227 <GO>}

Thanks, Kevin, and thank you all for joining us. Crystal, please go ahead and wrap up the call.

Operator

Thank you. Ladies and gentlemen, thank you for participating in today's conference. This does conclude the program. You may all disconnect. Everyone have a wonderful day.

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