25-Jan-2018
Rogers Communications, Inc. (RCI)
Q4 2017 Earnings Call
CORPORATE PARTICIPANTS

Amy Schwalm
Vice President-Investor Relations, Rogers Communications, Inc.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

OTHER PARTICIPANTS

Aravinda Galappatthige
Analyst, Canaccord Genuity Corp.

David Barden
Managing Director & Senior Telecommunications Equity Research Analyst, Bank of America - Merrill Lynch

Jeffrey Fan
Analyst, Scotia Capital, Inc.

Vince Valentini
Analyst, TD Securities, Inc.

Tim Casey
Analyst, BMO Capital Markets (Canada)

Drew McReynolds
Managing Director, Global Research, Telecommunications & Media, RBC Capital Markets

Simon Flannery
Analyst, Morgan Stanley & Co. LLC

Greg MacDonald
Analyst, Macquarie Capital Markets Canada Ltd.

Maher Yaghi
Analyst, Desjardins Securities, Inc.

Phillip Huang
Analyst, Barclays Capital Canada, Inc.
MANAGEMENT DISCUSSION SECTION

Operator: Good morning, ladies and gentlemen, thank you for standing by. Welcome to the Rogers Communications Q4 2017 Results Analyst Teleconference. At this time, all participants are in listen-only mode. Following the presentation, we'll conduct a question-and-answer session and instructions will be provided at that time for you to queue up for questions. [Operator Instructions] I would like to remind everyone that this conference call is being recorded today on Thursday, January 25, 2018 at 8:00 AM Eastern Time.

I will now turn the conference over to Ms. Amy Schwalm with the Rogers Communications management team. Please go ahead.

Amy Schwalm
Vice President-Investor Relations, Rogers Communications, Inc.

Good morning, everyone. Thanks for joining us. I'm here with our President and Chief Executive Officer, Joe Natale; and our Chief Financial Officer, Tony Staffieri. Today's discussion will include estimates and other forward-looking information from which our actual results could differ. Please review the cautionary language in today's earnings report and in our 2016 Annual Report regarding the various factors, assumptions and risks that could cause our actual results to differ.

With that, let me turn it over to Joe to begin.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Thank you, Amy, and good morning, everyone. Today, I'm pleased to share our full year results along with our performance in the fourth quarter and our guidance for 2018. Let me start with our full year results. In 2017, our team delivered the best financial and subscriber performance we have seen in many years. And we've set a solid foundation for sustained growth as you will see in our 2018 outlook.

Overall, for 2017, we grew total service revenue by 4% and adjusted operating profit by 6%. We grew after-tax free cash flow to CAD 1.75 billion. We delivered our 2017 financial guidance and returned CAD 988 million to shareholders through dividends. Our growth was largely driven by Wireless which delivered service revenue growth of 7% and adjusted operating profit growth of 8%. These are the best Wireless financial results we have seen since 2009. I'm pleased to report that we gained 354,000 net additions and delivered a churn rate of 1.2%. These are the best subscriber metrics we have seen since 2010.

In Cable, we grew Cable households for the second straight year in a row. This represents an important continuing inflection point for us, given we faced four prior years of decline. In Media, we saw revenue growth in our sports television, radio and digital businesses. We remain fiercely focused on both local content and large sports. The team has worked hard to make Sportsnet Canada's number one sports media brand for the third year in a row.

Turning to the fourth quarter, we continued to generate strong financial growth. In Q4, total service revenue was up 4% with operating profit growth of 6%. Wireless continued to deliver strong financial performance, and we were pleased to see ARPU grow by 5%. We set a new record high for postpaid gross additions in Q4. Unfortunately, this upside was diminished by a technical issue that impacted churn. During the peak promotional
In Cable, we reported strong financials with both revenue and profit growth. We also successfully balanced subscriber additions with ARPU performance. Today, 54% of our residential Internet customers are now on speeds of 100 megabits per second or higher. This is up from 46% a year ago.

Turning to 2018, we have strong momentum, a clear plan for sustained financial growth, along with strategic capital investments in our core business. This morning, we announced our 2018 guidance that reflects continued growth in revenue and accelerated growth in both profit and free cash flow. Overall, we are bullish about our future and our underlying growth potential. Consumer and business demand for data continues to soar, roughly doubling every 18 months. Wireless penetration rates continue to grow from 87% moving towards U.S. levels of 119%. This was bolstered by Canada's forecasted GDP growth, record-low unemployment and generally healthy macroeconomic conditions. Our strong portfolio of assets, our strategic priorities and our great team are our strong foundation to achieve the growth that lies ahead.

We remain relentlessly focused on our core business and driving on the fundamentals that deliver shareholder value. Operational excellence and well-timed network investments will be the key to our success. You will see that we've decided to maintain our dividend at CAD 1.92 a share. Fundamentally, we remain committed to growing the dividend on a long-term sustainable basis and we will return to dividend growth at the right time. Right now, we are steadfast in our focus to drive and grow the fundamentals. Growth in revenue, margins, adjusted operating profit and free cash flow remain our primary focus in driving share value while improving our debt leverage ratio.

Our 2018 guidance reflects strong growth in these fundamentals for the year ahead. In 2018, we will focus on our six strategic priorities; our customers, our people, our growth, our networks and technology, our investments in innovation to support our core business and our communities.

2018 will be a big year for network. And I'm pleased to welcome our new Chief Technology Officer, [ph] George Fernandez (00:06:08) next week. [ph] George (00:06:10) brings a great depth and breadth of global experience across wireless, cable and telecom. Our networks are the lifeblood of our business and the foundation for everything we do. At Rogers, we have always invested to be at the forefront of commercially-ready technology, to be at the leading edge. We've always been a leader. We led with 1G then 2G, then 3G and 4G. Today, we're at the advent of 5G. In 2018, we will see technology and applications develop for 5G. We are ready again, ready to make the right bets at the right time.

In 2017, we accelerated the move to 4.5G LTE advanced technology while setting the stage for a smooth evolution to 5G. Now, we have the latest equipment with better than ever unit costs and spectrum efficiency and equipment that is only very recently 5G ready. In 2018, we will ramp our efforts trialing 5G across key applications and multiple frequencies. Over time, we will deliver a broad range of 5G services across mobility, broadband and IoT. To get us ready, we will reform 2G and 3G spectrum. We will build a solid 4.5G foundation with 5G-ready network equipment. We'll continue to densify our network with more macro and small cells in key markets. This is all about delivering best-in-class, reliable, worry-free experiences to our customers.

I'm excited about the potential of 5G and what it will mean for our customers. In Cable, we continue to be impressed with the power of DOCSIS and what it can deliver. The next generation of DOCSIS will support upload and download speeds of 10 gigabits per second. We will continue to augment our node segmentation efforts to
drive fiber deeper into our access network. In 2018, we will begin migrating to a passive network architecture. This next-gen DOCSIS passive hybrid fiber and coax network will future-proof our business. This transition is not a big bang effort; it is an evolutionary, node-by-node and success-based investment. We are focusing first on neighborhoods with the greatest data demands and opportunities for cost efficiencies. We foresee a reliable roadmap to reduce CapEx and improve ROI in the years to come.

I'm also excited to share that Ignite TV, our new IPTV service license from Comcast is in full employee trial. Hundreds of employees are already using the service, and we're actively putting Ignite through an exhaustive review. As I said last quarter, we will take our time to do this right and to pressure test all aspects of our service experience. Ignite TV will deliver a high-value, premium service with the most advanced features in video experience and a robust product roadmap. I have a service at home and I'm blown away by Ignite TV and all that it has to offer. It's a game-changer for our customers and the long-term success of our Cable business. We see strong growth potential on Cable with our superior broadband product and the capabilities that will come with IPTV and Smart Home offerings into the future.

Underscoring all of this is a relentless and extensive focus on customers. I truly believe what gets measured gets done. So, in 2018, we are placing 50% of our company-wide bonus plan on the achievement of customer metrics. We will simplify our products and overhaul critical moment of truth processes, such as residential moves, handset upgrades, service repair, and price plan changes. We will further enhance our website, mobile, and digital properties for a more reliable, consistent experience across every customer interaction. Ultimately, we strive to be clear, simple, and fair in every interaction. As customer service improves, hand in hand, we will drive greater cost efficiencies.

Before I turn it over to Tony, I'd like to thank our team for their tremendous commitment to our customers, and to each other. You worked incredibly hard last year to deliver these great results. I'm immensely proud of what we have accomplished. I know we are ready for the opportunities that lie ahead. Tony, over to you.

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

Thank you, Joe, and good morning, everyone. Thank you for participating on our call, and I'm pleased to share with you some additional highlights on our continuing strong financial performance. In the fourth quarter, we continue to generate strong service revenue growth, expanded overall margins by 1-1 full-percent, and delivered ongoing growth in adjusted operating profit. Our margin expansion reflected solid traction on our cost efficiency programs. These programs included, as examples, a streamlined management workforce, management of non-core discretionary costs, and continued renegotiations of rates and terms with our third-party suppliers.

These cost initiatives more than offset our significant growth in net equipment subsidies in our Wireless business, as well as the decline in Media profitability. For the full year, our cost management efforts supported overall management expansion of 80 basis points. So good progress on this front with more opportunities into 2018 to achieve the margin expansion goals we've previously communicated, 100 to 200 basis points of growth in Wireless and Cable margins in 2018 over 2016.

In Wireless, we reported service revenue growth of 7% in the fourth quarter with more subscribers and strong blended ARPU and postpaid ARPA growth in the quarter. Wireless blended ARPU and the postpaid ARPA grew 5% and 6% respectively. Blended ARPU growth accelerated nicely from Q3 2017.

Effective in Q4 and on a prospective basis, we reduced our cumulative postpaid subscriber base by 207,000 subscribers to remove a government account migrating to another provider over the next few quarters. We
believe this provides a better reflection of our underlying organic performance. The account carried an extremely low average ARPU. On a normalized basis, the loss of this account is accretive to blended ARPU by about 1%.

Wireless adjusted operating profit grew 9%, and our flow-through rate of revenue to AOP was 52% compared to 34% a year earlier, resulting in expanded margins of 60 basis points. These results were achieved despite making significant customer investments. The net costs of handset subsidies increased 17% year-on-year in the quarter, reflecting a material increase in retention spend. Device upgrades were up 7% year-on-year on renewals with a higher sales mix of premium phones.

Turning to Cable, we grew Cable revenue to 2%, adjusted operating profit by 3%, and margins by 80 basis points in the fourth quarter. For the full year, we also grew AOP by 2% and margins by 80 basis points. Higher AOP and margins were driven by cost efficiencies, together with the ongoing product mix shift to higher-margin Internet services.

Our Internet competitive speed advantage continued to track well in the fourth quarter with healthy Internet revenue growth of 9%. Fourth quarter Internet revenue comprise 48% of total Cable service revenue compared to 44% a year ago. Despite aggressive pricing during the quarter from our main competitor, we added 13,000 total service unit additions and 17,000 Internet net additions. We also delivered Internet ARPU growth of 5%, trending higher from Q3. So on the Cable front, financials were very strong driven by our Internet business. We continue to expect healthy Cable margins in 2018, notwithstanding projected launch costs and subscriber license fees for our new Ignite TV.

In Media, Q4 revenue and AOP declined as the Blue Jays made the postseason in 2016 and due to lower print revenue since we announced the strategic shift to digital in late 2016. In 2018, we expect growth in Media margins driven by higher revenue and an improved cost structure.

Now, I'll go through some additional details in our financial results. In Q4, free cash flow was largely impacted by the timing of CapEx spend. Overall CapEx and capital intensity were higher and in line with our updated guidance provided last quarter and previous messaging that spending would be weighted to the second half of the year. Wireless CapEx increased as we ramped up deployment of our advanced 4.5G network, laying the foundation for 5G.

During the quarter, we began upgrading our radio infrastructure to the latest technologies and activated the AWS-1 spectrum acquired in 2017. Higher Cable CapEx was driven by the integration costs for Ignite TV and higher network investments to further increase speed and capacity and incorporate the latest technologies in our fiber coax network.

Moving to overall performance below the operating line, adjusted net income was up 19%, largely on higher AOP and lower depreciation and amortization. Net income increased as a result of prior-year losses largely related to our legacy IPTV product. With respect to our financial flexibility, strong AOP helped generate operating cash flow of CAD 1.14 billion, which supported dividend payments of CAD 247 million in the fourth quarter. We ended Q4 with a debt leverage ratio of 2.8 compared to 3.0 a year ago, driven by higher AOP and lower net debt. Over time, we expect profit and free cash flow growth to fund debt repayments and generate further improvements in the ratio. Our balance sheet remains healthy with liquidity at the end of the quarter of CAD 2.7 billion with solid investment grade credit ratings, stable outlooks, and attractive rates on our outstanding debt with further reduction opportunities on this front in 2018.
Turning to 2018, our financial guidance released today reflects our expectation to grow total revenue in the range of 3% to 5%. Profit growth, now defined as adjusted EBITDA, is expected to accelerate to 5% to 7%. Free cash flow growth is also anticipated to accelerate in 2018 despite our increase in CapEx to a range between CAD 2.65 billion and CAD 2.85 billion focused on network investments.

A few comments to help you interpret these guidance ranges, as I mentioned, we will commence reporting adjusted EBITDA starting in Q1 of 2018 as opposed to adjusted operating profit, and our guidance ranges were provided on this new basis. The only difference between the two metrics is that adjusted EBITDA will include stock-based compensation expense. We believe this is a better reflection of our underlying profit and allow for better comparability. This change will have no impact on our year-on-year growth rates. We will adopt the IFRS 15 revenue standard beginning in Q1 of this year. We will provide our results under both the existing standard, as well as under the new IFRS standard to allow for a clear and transparent understanding of the changes to our figures. We do not expect any meaningful impact to our growth rates under the new standard. So, our guidance ranges provided today are the same under either accounting standard. The new standard however, will materially affect our revenue categorization, more revenues allocated to equipment revenue with a similar reduction in service revenue. We will provide more information on the impact of the new standard throughout 2018 starting with the release of our 2017 annual audited financial statements in early March.

Overall, we are very pleased with our financial performance for Q4 in 2017. We're confident in our ability to deliver an even stronger growth profile in 2018. We're focused on driving sustainable growth in our core business including improving our overall cost structure. Ultimately, our goal is to deliver the best experience for our customers and greater return on investment for our shareholders.

With that, I'll ask the operator to open the line for questions.

**QUESTION AND ANSWER SECTION**

**Operator:** Thank you. [Operator Instructions] Your first question will come from the line of Aravinda Galappatthige with Canaccord Genuity. Please go ahead.

**Aravinda Galappatthige**

*Analyst, Canaccord Genuity Corp.*

Good morning. Thanks for taking my questions. I wanted to start with the – sort of the Wireless market in Q4, given the level of activity that you saw. When you kind of look at, sort of the churn number, the postpaid churn number that kind of spiked a bit, and I know, Joe, you alluded to that. Was that – if you kind of exclude sort of the promotional period during that mid-December timeframe, was that sort of trending differently prior to that? I'm just trying to get a sense of how it kind of played out through the quarter.

**Joseph M. Natale**

*President, Chief Executive Officer & Director, Rogers Communications, Inc.*

Sure. I'll be happy to address that. If you look at leading in the promotional period, we were overachieving on churn. Correct me, if I'm wrong, Tony, but I think we were ahead the previous year by high single-digits in terms of basis points improvement year-over-year.
Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

That's right.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

And it was that five days of intense promotional activity where we had some issues with our price plan change system that really inhibited our ability to kind of address customers who are requesting a price plan change. So, as a result, they chose to go elsewhere during that period. But fundamentally, our capabilities around managing the churn profile will not change in 2018. It's very much something that was incidental to that period of time when there was a large volume of customers coming through. Just bear in mind that in Q4 – in fact, in every Q4, there are about 14 days or so between the Black Friday weekend, the days before Christmas and Boxing Week that represent for us about 60% of our volume. So, being impeded for five days during that period was really the anomaly that drove the churn, nothing more fundamental than that.

Araminda Galappatthige  
Analyst, Canaccord Genuity Corp.

Great. Thanks. And just on the dividend, because I know there's been a discussion around that. Can you just maybe sort of elaborate on your decision there to maintain the dividend? Obviously, you're making progress in terms of your leverage down the road. You're still guiding strong free cash flow growth notwithstanding the higher CapEx. And obviously, our payout ratio is among the best in the sector. I mean, can you just maybe elaborate on sort of the decision to maintain the dividend at this point?

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Sure. I'd be happy to. First of all, let me say, as I alluded to my comments that job one for us is driving shareholder value. And driving shareholder value by focusing on our core business to grow and drive the fundamentals of revenue, AOP or EBITDA now, free cash flow and return on capital. Just to be absolutely clear, our capital priorities are, number one, to invest in profitable growth in our core business. And you're seeing that we're stepping up our capital investment. We've got a spectrum action – a spectrum auction on the horizon. These are all fundamentals of the future of our business.

Number two is a strong balance sheet. We will bring leverage down this year. I'll ask Tony to comment on that in a second. And number three, shareholder return of capital. So we are committed to sustainable dividend growth. And our 2018 guidance, I believe, really reflects the confidence that we do have overall. You look at the growth in revenue, EBITDA and free cash flow as a step-up from where we were in 2017. We're really pressing on the gas, on the key drivers. And when the time is right, we will take a look at dividend growth and get back to shareholders with our views and intentions.

Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

On the debt leverage, we continue to view a range of 2 to 2.5 times as the ideal debt leverage ratio for us. As I said in my comments, we ended the quarter at 2.8. It was a healthy decline from 3.0 a year ago, if you flow-through when we look at our projections and you flow through the guidance ranges we had provided and work that through in your models, you'll see that our expectation is to continue to have healthy improvements in that
Rogers Communications, Inc. (RCI)  Q4 2017 Earnings Call

Rogers Communications, Inc. (RCI)  Q4 2017 Earnings Call

debt leverage ratio over the course of 2018. And so, a good plan to work meaningfully towards our 2.5 threshold in the near-term.

Aravinda Galappatthige
Analyst, Canaccord Genuity Corp.

Great. Thank you. I will pass the line.

Operator: We'll now take our next question from the line of David Barden with Bank of America. Please go ahead.

David Barden
Managing Director & Senior Telecommunications Equity Research Analyst, Bank of America - Merrill Lynch

Hey, guys. Thanks so much for taking the questions, and good morning. A few if I could. First, just talking about the promotional period especially those three, four, five days where the pricing got fairly aggressive starting out in the west and then coming back to the east. I guess kind of looking at the origin of that, it seems to have originated with Rogers. Could you kind of talk about what the game plan was and kind of how you saw that unfold and kind of what your learnings are from that kind of exercise and is it something that you feel like you might want to try to attempt again or maybe avoid?

The second question is related to the government contract. I guess – I just want to make sure I understood that you pulled it out of the sub numbers, but it's still in the revenue numbers. What would have the net add number looked like if you hadn't done that?

And then I guess the final question, Tony, if I could was just on the guidance. The EBITDA guide and the CapEx guide seem to be going up about the same amount and yet free cash flow is still growing. What is the part in the cash flow statement that's kind of allowing free cash flow growth to occur even as EBITDA and CapEx are kind of equal? Thanks.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.

David, I'll talk about Q4 and the marketplace and I'll ask Tony talk about both the government contract and the guidance overall. As I said a minute ago, we’re seeing these promotionally intensive periods get shorter and taller if you want to think of it that way whether it's back to school or Black Friday. And we said looking at the period before the Christmas holidays and said the market is kind of quite right now. I wonder when we’re going to see the heightened activity that we know is becoming even more intensified. I think, we’ve trained customers kind of wait for promotional periods.

And we made the call to pull forward that promotional volume or pull forward that seasonal volume. The debate we have was we pull it forward or wait for someone else to pull it forward. And we thought the best way to kind of create a smoother promotional period was to create a sale or promotion for five days, a very limited duration, five days only in Western Canada, in Alberta and DC and we lost a 5-gig per CAD 60 with a 5-gig bonus for 24 months, largely focused on bring your own device. That quickly got escalated over the next couple of days by our competitors and landed in being a 10-gig BYOD and available on a term with handset subsidy in Alberta, DC and Ontario, which really grew to reflect just the intensity in the marketplace and the reaction very quickly.

I was very pleased by the fact that we got record gross loading. Our sales distribution machine did a phenomenal amount of work in that period of time. The challenge that I said was we had an issue within our – with our price
plan change system that affected our call center, and really hurt us from an operational responsiveness point of view during that period of time as a whole. Just to be absolutely clear, we’re focused on driving the right mix. We’re focused on driving the right value in the marketplace. There will always be promotions during seasonal periods, and there were promotions a year ago. A year ago, the big promotion that was in the marketplace was CAD 40 for 4 gigs. And we’ll see that come from time to time, but we’re focused on price discipline, and we’re focused on smartphone-driven mix of business, and managing our base as overall philosophy.

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

David on the second – two questions you had, one related to the government contract. So to be clear on that, the total contract is worth 207,000 subscribers or lines for us. So we took that out of our opening cumulative base in the fourth quarter. I’m not going to get into disclosing the specific numbers of migrated, but off that total contract, I would say, it’s early stages of migration. So it’s a very small amount that started to migrate in the fourth quarter.

On your second question related to higher adjusted EBITDA guidance for 2018, higher CapEx, and therefore, higher free cash flow. The other piece that’s in there for you to think about is interest and cash taxes. And so we’ve done fairly good job of reducing our average interest rate and we think there’s opportunity into 2018. And then, as well on cash taxes, we continue to look for ways to ensure that we are efficient in the way we look at cash taxes. And so without providing specific guidance on those two specific numbers, I suggest you look at those in factoring the free cash flow for the full year.

David Barden
Managing Director & Senior Telecommunications Equity Research Analyst, Bank of America - Merrill Lynch

Awesome. Thank you, guys, for the answers.

Operator: We’ll now take our next question from the line of Jeff Fan with Scotiabank. Please go ahead.

Jeffrey Fan
Analyst, Scotia Capital, Inc.

Thanks. Good morning. Couple of questions, again, just related to the period in Q4, but more specifically I guess question for Joe is, what kind of the takeaways you have in terms of how the customers or the market reacted to the promotions that were launched by yourselves and then followed by your competitors? Like – because, I guess, it’s the first time that we’ve seen that much data being offered for that kind of price plan in the market, and certainly, the reception was huge. What were some of the takeaways that you think you can share with us in terms of what the market may or may not be ready for?

And then the second part of the question is, because of the increase in all the volumes in the quarter, what were the kind of customers that were coming in? I mean, usually what we’ve seen in the past is when these plans are offered, the optimizers tends to be the ones who were the ones lining up to get savings. So, I’m just wondering how this translates into ARPU impact in the following quarters. Thanks.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.

I think, in terms of the market learnings overall, I think it reinforce the fact that there is certainly a voracious appetite for data in the marketplace. We’ve said time and time again that market consumption of data is doubling every 18 months or so. We continue to see very strong ARPU performance and growth around that.
As you saw, Jeff, we posted 5% ARPU growth normalized for the government contract. It's 4% overall. Within that, there's about 9% data ARPU growth, if you kind of peel that away a little bit in detail. And we're seeing the momentum carry forward into 2018, so it's not sort of a one-quarter wonder from that perspective.

I think, at the end of the day, the learning for us as an organization is that operational execution more than ever is fundamentally important because the periods of time are becoming, as I said, shorter and more intensive. And customers, especially around the end of Q4, are kind of waiting for something to happen or something to break. We had a very busy Black Friday, record volume days through Black Friday, through Cyber Monday, and then quiet – absolute quiet heading into Christmas. And we kind of sat there and waited to see when will this spark?

And as I said earlier, do we wait for it to spark, and do we spark something to get it going? Clearly, execution for us was a challenge, otherwise I think we would have seen a very different outcome. We believe that that period of time [ph] costs us about 35,000 (00:32:49) nets, to put a very specific definitive number on it, and it costs us about 15 basis points of churn. So, you can normalize quickly for yourself what that operational step created overall.

I do believe that it's an isolated incident. It was very specific in terms of what happened. I won't get into the details, because of the competitive sensitivity around. And we've found the root cause, we've corrected it, and it's been [ph] nicely driven (00:33:19) behind us. I think that was the biggest learning of all for us as an organization.

I'd say, the other big learning for us is that our team rallied across every aspect of Rogers from the call center to the stores, the people in the field to management. They rallied around the channels that we had and found all kinds of creative and clever workarounds in the moment, recognizing that it was a five-day period that went by in a heartbeat overall. And what it's done for us is it sparked a level of activity and initiatives around making sure that we have the flexibility and resiliency going forward for promotional periods to come. And I think it will make us stronger and better as a result of that.

I think, overall, as I said a few minutes ago, we are completely committed to ARPU growth. We're committed to a healthy mix of customers. We did see a very strong mix of customers in Q4, that's an interesting sort of irony in the situation as a whole, given the challenge that we just faced. On the business front, we saw most of our loading come from small to medium business which is, by far, our healthiest category; next, corporate; and third, sort of IDV or employee purchase plans. A year ago, the mix was exactly the reverse of that.

If you look on the consumer front, a very much stronger mix of smartphone customers in the quarter and, therefore, a better lifetime value and better overall churn profile as a result. And behind the scene, it's not as reflected in the numbers. That is the focus of our organization to keep driving for quality and value and a stronger mix of customers both across consumer and business.

Jeffrey Fan
Analyst, Scotia Capital, Inc.

Great. Thanks, Joe.

Operator: We'll now take your next question from the line of Vince Valentini with TD Securities. Please go ahead.

Vince Valentini
Analyst, TD Securities, Inc.
Yeah. Thanks very much. First, just a clarification question, just to make sure I understand this. So, if you backed – if you had not adjusted for the 207,000 customers on the government contract, your ARPU growth would have been 3.5% instead of the 4.5% you reported. And the 4.5% is you're excluding the 207,000 subs, but the revenue from whatever sub you're still capped is still in the numerator. Is that the right way to think about it, Tony?

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

The short answer is, yes. So to repeat what you said, ARPU growth excluding that. So the impact of taking out the subs, but including that revenue was one point in the quarter. So it's otherwise a 3.5% blended ARPU growth.

Vince Valentini
Analyst, TD Securities, Inc.

Perfect. Okay.

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

I should add...

Vince Valentini
Analyst, TD Securities, Inc.

3.5% is still – 3.5% is still a very good number, by the way. So that's congratulations on that aspect of it. My question unfortunately maybe...

Anthony Staffieri
Chief Financial Officer, Rogers Communications, Inc.

Thanks, Vince.

Vince Valentini
Analyst, TD Securities, Inc.

My question...

[indiscernible] (00:36:27)

Vince Valentini
Analyst, TD Securities, Inc.

...maybe a bit more negative and people seem to be tiptoeing around this issue. But, I mean, the promotion you put out there in December was identical to what Freedom had been doing a few weeks earlier. It's the first time we've seen you guys kind of respond to what Shaw and Freedom are doing and almost acknowledge that they're starting to have more impact. So, I mean, can you comment on, are you getting more worried about them? And specifically I'm shocked that you're not raising your dividend given how strong your financials are. Is the board worried that Shaw's competition may start to hurt your numbers and your debt reduction plan over the course of this year, so that's why you're holding back on the dividend? Thanks.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.
Yeah. So, maybe clear and unequivocal, the promotional activity in Q4 had nothing to do with any one of our competitors, as a response to any one of our competitors full stop. As it relates to competing with Freedom Mobile, we’ve been competing with some variant of Freedom Mobile from – or Wind is originally for 10 years. We’ve seen these types of rate plans in the market, on and off, over the last number of years. And the impact that they’re having on us is very small at the margin, not material, not a consequence, overall. And there’s absolutely zero concern from the board, from management about that impact whatsoever. The dividend policy that we put forward is only driven by the fact that we believe our number one priority is around driving growth in our core business and driving the fundamentals to drive shareholder value.

And if you want, a really great piece of evidence around that, just take a close look at the guidance that we put forward for the year. Last year, we grew revenue by 3%. Our guidance is putting forward 3% to 5% revenue growth. Last year, we had very healthy flow-through in 2017. Tony has helped you understand exactly the improved flow-through of that we were postulating in 2018. Free cash flow, free cash flow was 2% last year. We're putting forward 3% to 5% free cash flow as guidance for the coming year.

On top of that, we’re saying we’re going to spend somewhere between CAD 200 million to CAD 400 million of incremental capital around an already stepped-up capital plan from the previous year, again, to invest in our core business, right. And these are not plans or ideas or innovations that are new and fuzzy. This is our core business. This is, as I mentioned, up-front, on investment in the advent of 5G and getting ready through the latest in 5G-ready equipment for 4.5G LTE. This is an investment in the latest version of DOCSIS and a move towards a passive network and future-proofing our Cable business, which will give us, not in the long term, but in the short to medium term, 10-gig Full Duplex capability as a whole. It's also important to understand that these plans, both the financial plans and the guidance that we put forward, haven't changed over the last many months. We've put these plans in front of the board last summer in August, when we did our strategic review with the board. We've put them again in front of the board in October at our board meeting, reviewed our budget in December with the board, and again yesterday, and the plans have been fundamentally the same. The guidance has been fundamentally the same. So, to even suggest that they're reflective of some reaction from a competitor is just not at all the case.

**Vince Valentini**  
*Analyst, TD Securities, Inc.*

Thank you, [ph] guys (00:40:01).

**Joseph M. Natale**  
*President, Chief Executive Officer & Director, Rogers Communications, Inc.*

I hope that answers your question very clearly, Vince.

**Operator:** We'll now take our next question from the line of Tim Casey with BMO. Please go ahead.

**Tim Casey**  
*Analyst, BMO Capital Markets (Canada)*

Thanks. Good morning. Can you talk a little bit about what you’re seeing on the churn side since that five-day period and when you had the system issue? Did it normalize through the back end of December through – Boxing Week is usually a little more intense. And then, what are you seeing and what are you expecting as we go forward so far this year?
Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

So, yes, we did see it normalize. There certainly was some cleanup effort through the week or so after the promotion as a number of customers were calling us to try to – given they can get through for a period of time. But, no, we've normalized to normal levels, and we started the year back in a normal run rate. So we fully expect to get back in the zone that we were at for most of last year, Tim.

Tim Casey  
Analyst, BMO Capital Markets (Canada)

As a follow-on, given there were issues at the call center, do you think it impacted anything in terms of loading on the wireline side? And can you just – any detail you can provide us on when you think you'll be in market commercially with X1?

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

We don't believe that it impacted our Cable or wireline loading. The channel mix for Cable and wireline is a little different overall, and we continue to see good performance through the latter half of the quarter on the Cable front, recognized the fact that the results were good despite the fact that our competitor has a very aggressive promotion in the market at CAD 25 Internet only for 300-meg service.

So, you look at Internet revenue growth, Internet ARPU growth in the quarter, you look at loading for the year and the quarter, we’re generally pleased with the balance of subscriber growth and ARPU performance, which is really what we’re focused on is that balance. You could easily push the button and go after subscribers, but we want the right subscribers and maintaining our ARPU profile. I think, we've done reasonably well on Internet, and we've been doing it with, I would say, one hand tied behind our backs.

The launch of Ignite TV, our Comcast Xfinity IPTV product, will be a game-changer for us. Right now, it's an employee trial. I think, as of the end of this week, we'll have 500 employees on the trial, and we're adding in the neighborhood of 120 to 150 a week. So it's really starting to grow at scale. It's really an effort by us to really make sure that every aspect of the service experience, order through billing is completely pressure-tested. This is a premium product for us and therefore it must have a premium experience. Over time, we will evolve the employee trial into an external customer trial, [ph] which are (00:43:30) the layers of the commercial soft launch, as I mentioned before. And that includes friends and family and then a wider circle. And at some point later this year, we'll have a full-on, above-the-line TV commercials, billboards, commercial launch. We're not going to get into the timing of that. That's very competitively sensitive to us as you'd imagine, it would be [ph] 10 (00:43:52) as a whole.

We're very excited about with respect to Ignite TV. It's not just a TV product, but the roadmap around the Smart Home that's following right behind it. There is a very robust very exciting roadmap around integration of Smart Home Monitoring, around a whole bunch of solutions around home automation and home management, around IoT in the home that we think are game changers. And the platform is one that will more easily integrate all of it. It even has a room for voice in the home and home phone as an IP application on this platform that will fundamentally work differently from kind of the more standard voice application. So it's not just the launch of Ignite TV, but it's the launch of that entire connected home strategy that will give us the ability to really fight with both hands and continue driving the right fundamentals in the Cable business.
Tim Casey  
Analyst, BMO Capital Markets (Canada)

Thank you.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Thanks, Tim.

Operator: We’ll now take the next question from the line of Drew McReynolds with RBC Capital Markets. Please go ahead.

Drew McReynolds  
Managing Director, Global Research, Telecommunications & Media, RBC Capital Markets

Thanks very much. Good morning. First for you, Tony, on Cable EBITDA margin target for 2018, pretty consistent I think with what you’ve said over the last little while, you did say notwithstanding launch costs, which I certainly understand and you also said notwithstanding X1 licensing fees. So is this 100 basis points to 200 basis points year-over-year increase excluding those two items then just for clarification?

Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

So, thanks for the question, Drew. To be clear, the margins that I described, the margin expansion into 2018 are inclusive of those costs. And so I won't get into the specific timing, but as Joe alluded to with the launch of our Ignite TV product, there'll be costs associated with that launch. Our subscriber-based fee model with Comcast is largely a variable cost model. And so we factored those into our costs. And so the number that we're sharing with you is net of all those costs.

Drew McReynolds  
Managing Director, Global Research, Telecommunications & Media, RBC Capital Markets

Okay, that’s great. Thanks, Tony, for that. One last, I guess, clarification here. Can you provide us just what percentage of the postpaid base would have been upgraded in Q4?

Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

Yeah, Drew. As I said in my comments, we’re very aggressive in investing in our customer base. We saw volumes increased 7% year-on-year. We saw – if you took that as a percentage of our total postpaid base, subscriber base, it'd be at just under 6.5%. So, a step-up, a material step-up from what you would have seen in previous quarters.

Drew McReynolds  
Managing Director, Global Research, Telecommunications & Media, RBC Capital Markets

That's helpful. Thanks.
It's important to understand that upgrade focus we've had is driving real revenue not just washing the subsidy cost of the upgrade. We really worked hard to make sure we're targeting that portion of our base with an incoming APRU profile that truly pays for the subsidy but also provides accretive revenue and flow through.

Drew McReynolds  
Managing Director, Global Research, Telecommunications & Media, RBC Capital Markets

Thanks, Joe, and Tony, for that. One last one for me, bigger picture maybe with you, Joe, lot of talk through the fall on your examination of non-telecom assets within the Rogers' asset mix, lot of cord cutting, cord shaving inflection point type of talk out there in the TV market. Can you just refresh for us the strategic benefits that you see with respect specifically to sports and sports assets like the Blue Jays, Sportsnet and the MLSE, just provide an update there on where or why they fit within the broader group? That would be great. Thank you.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

I'd be happy to. First of all, sports is a very important part of our business and sports media and sports broadcasting remains a very important part of viewer preferences and audience appetites overall. So it will continue to be a very substantial and a strategic part of our business going forward. Very proud of the fact that Sportsnet is number one sports broadcaster in Canada for the third year in a row. We've got a game-changing NHL deal, a game-changing broadcast opportunity around the Blue Jays, which has become Canada's team overall. And I really believe that sports are fundamental to the future of the business and the future of in-home experience as a whole. Tony, you want to...

Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

[indiscernible] (00:48:44) I help clarify as well, Drew. To be clear, there are no plans to sell the Jays and we have been consistent on this point. We do see, as Joe said, tremendous value in the Toronto Blue Jays that isn't reflected in our total share valuation, and we'd like to see that better reflected in our overall valuation. Beyond that, I'm not going to say much more than that. [indiscernible] (00:49:14) fuels more speculation. And so just thought it'd be important that we clarified that.

John Murphy

Thank you.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Thank you.

Operator: We'll now take the next question from the line of Simon Flannery with Morgan Stanley. Please go ahead.

Simon Flannery  
Analyst, Morgan Stanley & Co. LLC

Great. Thank you. Good morning. Joe, I think, you talked about an opportunity that you saw to ramp up your commercial revenues in your Cable business. Can you just talk a little bit about what you see for that going forward? And Tony, thanks for the color on IFRS 15. We did see Verizon highlight a EBITDA boost from deferring
commissions. You mostly talked about the revenue impact. Can you just talk about anything you might see on the expense side as well? Thanks.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Simon, just to clarify your question, when you say the commercial side, I’m assuming you mean in the business category, B2B.

Simon Flannery  
Analyst, Morgan Stanley & Co. LLC

Exactly. SMB, enterprise. Exactly.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Yeah. We believe there is a very strong opportunity in the B2B business around Cable. I really believe that we’ve been under-indexed with respect to share in that area. If you look at our Cable peers in North America, if we did nothing more than kind of get to their same level of capability, then that’s a tremendous opportunity for growth for this organization.

The Cable investment is there already, the plant is in the ground already. It’s a question of organizing the sales force and organizing our efforts around going to market on that front, and Dean Prevost is squarely focused on that. He's got great background in terms of addressing the needs of small and medium business, and it's one of our important priorities for the Enterprise Business as a whole.

We have a lot of things working to our advantage on that front. If you look at DOCSIS 3.1, the opportunities to support small business and a lot of great features that I think are very useful for the small business category. If you look at the efforts that we're making around our network build, both in Wireless and Cable, we talked earlier about the capital that we're investing in 4.5G LTE capability, the node segmentation, by definition, what we're doing is we're running fiber to different parts of our network. We're going to make sure that we're very thoughtful in net fiber, making its way closer to business parts and places that are not served by our current Cable footprint.

So, along the way, we will get in an economy of scale and scope, frankly, at a very incremental cost that will make the economics of that expansion really, really attractive. So, there's an opportunity for us that we think is material. And it's just a question of organizing around it, and we've got all the ingredients to do that. So it will be a very important year for us on this front as we drive forward on that basis.

Simon Flannery  
Analyst, Morgan Stanley & Co. LLC

Okay. Thank you.

Anthony Staffieri  
Chief Financial Officer, Rogers Communications, Inc.

Simon, in reference to your second question on IFRS, to help clarify, we really saw results at the end of the first quarter. We will disclose figures under the old accounting as well as the new accounting and provide year-on-year rates for each of those. So, the intent is to give you a very transparent and clear apples-to-apples comparison of old and new.
When you look at the impact of IFRS on the absolute dollar values, I talked about earlier the revenue categorization. And so, you see a bit more of a mix shift from service revenue to equipment revenue. And on the EBITDA line, as a result of deferring, as you said, commission expenses, and there is a few other very small at the margin expenses. So it is largely commissions that's deferred and amortized. That'll have a slight increase to EBITDA or adjusted EBITDA. I should say, but importantly, it's going to be the year-on-year growth rate for each, and we'll be very transparent with both methods.

Simon Flannery
Analyst, Morgan Stanley & Co. LLC

Great. Thank you.

Operator: We'll now take the next question from the line of Greg MacDonald with Macquarie. Please go ahead.

Greg MacDonald
Analyst, Macquarie Capital Markets Canada Ltd.

Thanks [indiscernible] (00:53:41). Thanks for sort of fitting me in, guys. Joe, question is on – related to the dividend again, but it's just more trying to understand how the board thinks about this definition of when the time is right. You mentioned the 600 megahertz auction is having an impact. Certainly, the question mark in terms of how much it could cost. Is the board and the management thinking when it comes to dividend timing or timing for an increase again? Is it thinking uncertainty on spending items like that, or is it thinking ultimately just balance sheet leverage because, as we all know, there are potential for asset sales? Thanks.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Overall, the focus is a mix of those items. It's continued sustain performance in our core business. It's driving the right leverage on our balance sheet. It's making sure we have the cash to invest in our core business and the upcoming spectrum auction of 600 megahertz, we don't have any sense of where that's going to go, but it's a very important auction for us. On the heels of that to the other auctions around 5G, frequencies they're also important. So we're going to remain balanced and prudent on this front. We are committed to sustainable dividend growth in the long term. We have every bit of confidence in the guidance we put forward and the future growth potential of our business.

So it really comes down to a moment in time we believe it's right to take the next step in dividend growth. But focusing on the very core drivers, revenue, AOP, free cash flow, return on capital, I think, are great things for the future of this business, will give us all kinds of options in terms of what to do with that growth. And I think you're relying on us to make sure that we take that cash, take that growth and apply it to the right mix of investments. We have been focused on value and with, I think, a very good job of focusing on the value drivers in 2017 and the same will be said of 2018. And I think we are very well poised for long-term growth and long-term shareholder returns.

Greg MacDonald
Analyst, Macquarie Capital Markets Canada Ltd.

Understood.

Joseph M. Natale
President, Chief Executive Officer & Director, Rogers Communications, Inc.
Hope that answers your question, Greg. Looking for a specific date or trigger, it's not about specific date or trigger, it's about assessing on a regular basis that balance and the capital priorities I talked about earlier.

**Greg MacDonald**  
*Analyst, Macquarie Capital Markets Canada Ltd.*

Yeah, [ph] it does (00:56:24). And I'm not debating impacting and the stocks done quite well even without the dividend increase over the past year. So, obviously, the growth message, the market likes that some people might want to focus on this issue of timing. And I guess the follow-on question I would have is with a spectrum auction unlikely until the first quarter 2019, does that – are you kind of implying that you're not going to get a dividend increase at this time next year, either just because of that issue or could other things affect that?

**Joseph M. Natale**  
*President, Chief Executive Officer & Director, Rogers Communications, Inc.*

No. I'm not telegraphing or implying anything. I'm just saying we will continue to assess it over the course of time. And there will be more clarity around all the factors I talked about every given quarter going forward and we'll keep you updated as we go along the way.

**Greg MacDonald**  
*Analyst, Macquarie Capital Markets Canada Ltd.*

That's fair. Thanks, Joe.

**Joseph M. Natale**  
*President, Chief Executive Officer & Director, Rogers Communications, Inc.*

Okay.

**Operator:** We'll now take the next question from the line of Maher Yaghi with Desjardins. Please go ahead.

**Maher Yaghi**  
*Analyst, Desjardins Securities, Inc.*

Thank you for taking my question. People might argue that it's not really what a new competitor in the wireless market can do to pricing, it's what the incumbents do to themselves that can cause harm to the industry. When you look at, you look back at the promotions that were happening in December. Do you think it's justified that you guys go out with those kind of promotions when, as you said, Joe, it was not a reaction to what Shaw doing in the market? Can we draw some conclusions on, was this the right strategy to go out with to draw attention or to grab attention from consumers?

And the second question I had is as you said if we adjust for ARPU in the quarter, 3.5% growth, as you look out in 2018 with the churn that we saw and the change in customer accounts due to these promotions that took out, that took the place in December. What kind of ARPU growth are we to expect in this next couple of quarters? Are we expected to see some deceleration – significant deceleration or a slow and steady decline?

**Joseph M. Natale**  
*President, Chief Executive Officer & Director, Rogers Communications, Inc.*

Okay. Thanks, Maher, for the questions. First of all, it's important to understand that the promotion was five days long, five days, Thursday through Monday, December 14 through the Monday. So, it's a very short period of time.
It is that time of the year when there are promotions out there. For all kinds of categories of retail service providers in the marketplace, it's that kind of – time of season.

I don't think it's right for me to comment on our competitive pricing promotion strategy as an organization. I think it's on the sensitive base of thinking. And it's not useful to our shareholders to comment on it openly on a call like this given the competitive sensitivity around it. I will say that we are 100% committed to lead on ARPU growth. And on ARPU growth, we think we have good momentum. We posted a good number in Q4, and we expect the momentum to continue into the future. And everything within our analysis understanding of our businesses that we are well poised to make that happen.

Operator: We'll now take our next question from the line of Phillip Huang with Barclays. Please go ahead.

Hi. Thanks. Good morning. Thanks for filling me in. Just wondering if you are able to share, perhaps, your estimate of the impact about technical issue during the peak promotion [ph] season, and so clearly (01:00:20), we're trying to, I guess, back into what churn would have been and given that churn – you expect churn to normalize into Q1, I just wanted to kind of see to what extent the technical issue was the primary cause and that whether we can expect churn to continue to improve through 2018.

Sure. I think, I mentioned this earlier, but if I didn't, I'll go through it. We believe the impact for that five-day period was about 35,000 deactivations. If you normalize for the 35,000 deactivations, it's about 15 basis points of churn. So it brought churn from 1.48% down to 1.33%. And as part of that, the Government of Canada is about 3 points of churn in terms of – when you take the number out of the base, given an adjustment – and actually it is not [ph] flattered (01:01:28) to churn as well. So, it would have been a very strong churn performance, and we were running – leading up to December 14, we were running high single-digit year-over-year improvement in churn. So it very much was that isolated period of time. And as I said a little while ago, we've seen it settle back into normal levels as we've kind of gotten through that period. So, we're not concerned.

Right. That's super helpful. And with the push out of the iPhone X upgrade this year due to supply issues, do you see Q1 being a less – perhaps a less – a bit of a blip in terms of seasonality compared to the normal Q1 that tends to be relatively quiet? Thanks.

I'm sorry, Phillip, you were just a bit garbled. I didn't hear the question overall.

Yeah. Sorry. Can you hear me better now?
Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

That's better. Yeah.

Phillip Huang  
Analyst, Barclays Capital Canada, Inc.

I just wanted to ask about the – yeah, I just want to ask about the push-out of the iPhone X upgrade volumes this year because of the limited supply. Perhaps there might be some pent-up demand that sort of creeps into Q1 more so than perhaps the prior years. Are you expecting sort of the industry to see just seasonal slowdown as a result of the volumes despite the sort of what already happened in Q4 or do you think things are likely to continue to follow what we've seen in the prior year just in terms of seasonality. Thanks.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Yeah. We saw a very strong iPhone sales unloading through Q4, and we've seen no sort of delay or push into Q1. And we're well poised in terms of support in inventory and capability for Q1 on this front. And we'll continue to kind of drive forward with that product offering in the marketplace.

Phillip Huang  
Analyst, Barclays Capital Canada, Inc.

Perfect. Thanks very much.

Joseph M. Natale  
President, Chief Executive Officer & Director, Rogers Communications, Inc.

Thank you.

Operator: Ladies and gentlemen, that's all the time we have for questions. And this will conclude the Q&A session for today. Thank you for participating, and you may now disconnect your lines.
Disclaimer
The information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete or error-free statement or summary of the available data. As such, we do not warrant, endorse or guarantee the completeness, accuracy, integrity, or timeliness of the information. You must evaluate, and bear all risks associated with, the use of any information provided hereunder, including any reliance on the accuracy, completeness, safety or usefulness of such information. This information is not intended to be used as the primary basis of investment decisions. It should not be construed as advice designed to meet the particular investment needs of any investor. This report is published solely for information purposes, and is not to be construed as financial or other advice or as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Any information expressed herein on this date is subject to change without notice. Any opinions or assertions contained in this information do not represent the opinions or beliefs of FactSet CaliStreet, LLC. FactSet CaliStreet, LLC, or one or more of its employees, including the writer of this report, may have a position in any of the securities discussed herein.

THE INFORMATION PROVIDED TO YOU HEREUNDER IS PROVIDED "AS IS," AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, FactSet CaliStreet, LLC AND ITS LICENSORS, BUSINESS ASSOCIATES AND SUPPLIERS DISCLAIM ALL WARRANTIES WITH RESPECT TO THE SAME, EXPRESS, IMPLIED AND STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, COMPLETENESS, AND NON-INFRINGEMENT. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER FACTSET CALIstreet, LLC NOR ITS OFFICERS, MEMBERS, DIRECTORS, PARTNERS, AFFILIATES, BUSINESS ASSOCIATES, LICENSORS OR SUPPLIERS WILL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION DAMAGES FOR LOST PROFITS OR REVENUES, GOODWILL, WORK STOPPAGE, SECURITY BREACHES, VIRUSES, COMPUTER FAILURE OR MALFUNCTION, USE, DATA OR OTHER INTANGIBLE LOSSES OR COMMERCIAL DAMAGES, EVEN IF ANY OF SUCH PARTIES IS ADVISED OF THE POSSIBILITY OF SUCH LOSSES, ARISING UNDER OR IN CONNECTION WITH THE INFORMATION PROVIDED HEREIN OR ANY OTHER SUBJECT MATTER HEREOF.

The contents and appearance of this report are Copyrighted FactSet CaliStreet, LLC 2018 CaliStreet and FactSet CaliStreet, LLC are trademarks and service marks of FactSet CaliStreet, LLC. All other trademarks mentioned are trademarks of their respective companies. All rights reserved.