Swiss Re Ltd SWX:SREN FY Nine Months 2018 Earnings Call Transcripts

Thursday, November 01, 2018 1:00 PM GMT S&P Global Market Intelligence Estimates

^{**} Error while rendering estimates data.

Table of Contents

Call Participants	 3
Presentation	 4
Ouestion and Answer	5

Call Participants

EXECUTIVES

Edouard Schmid

Group Chief Underwriting Officer

John Robert Dacey

Group Chief Financial Officer

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

ANALYSTS

Andrew James Ritchie

Autonomous Research LLP

Edward Morris

JP Morgan Chase & Co, Research Division

Frank Kopfinger

Deutsche Bank AG, Research Division

Jonathan Peter Phillip Urwin

UBS Investment Bank, Research Division

Kamran Hossain

RBC Capital Markets, LLC, Research Division

Sami Taipalus

Goldman Sachs Group Inc., Research Division

Thomas Seidl

Sanford C. Bernstein & Co., LLC., Research Division

Vikram Gandhi

Societe Generale Cross Asset Research

Vinit Malhotra

Mediobanca - Banca di credito finanziario S.p.A., Research Division

William Hawkins

Keefe, Bruyette & Woods Limited, Research Division

Presentation

Operator

Good morning or good afternoon. Welcome to Swiss Re's 9 Months 2018 Results Conference Call. Please note that today's conference call is being recorded. At this time, I would like to turn the conference over to John Dacey, Group CFO. Please go ahead.

John Robert Dacey

Group Chief Financial Officer

Good afternoon or morning to all on the call. I'd just like to quickly introduce the 9-month results with a couple of thoughts of my own and then return quickly over to questions. The first, to state the obvious, at 9 months, we do have a very positive result, USD 1.1 billion for our net income. I think the magnitude of losses that we've had from the nat cat sector, materially different than last year, but for third quarter, reminded us that in fact this loss will recur and recur across various jurisdictions.

The second point on the resilience of our P&C Re business. In spite of those large man-made and nat cat losses, \$634 million of profit for the first 9 months, annualized ROE above 8%. I think a resilient business, which we expect to continue to be able to grow as we've done modestly in the first 9 months of 2018.

Third, the very strong performance I would argue of Life & Health Reinsurance, again \$640 million of profits within 9 months and annualized ROE above 12%, a -- importantly also a real growth in this business coming from a combination of and expansion in high-growth markets, broadly China specifically, and a continued success in bringing home important transactions in the more developed markets.

Fourth, on the investment side, a stable running yield of 2.9%. We started to see interest rates move up in the U.S., unfortunately not much motion in Continental Europe. Nonetheless, we've been able to project that running yield. Overall, the return on investments of 2.8%. If you adjust for the U.S. GAAP changing guidance, would have been 3.0% for the 9 months. And last, I'm sure most of you have noticed the --we've published a Group SST estimate for July 1 of this year, a positive movement from the beginning of the year from 269% at January 1 to 285% at July 1. This reflects what we believe to be a continuing increase in the value generation of the Group. We'll have more details on the full year number when we publish it based on the full year EVM results. And with that, I'd turn it over to our host, again, today, Philippe Brahin to manage the questions.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Many thanks, John, and good day to all of you also from my side. So as you know, we have adjusted the format for our reporting, and our comments during the call would be focused on our 9-month results, in line with the scope of our press release. [Operator Instructions] In the room here today, we also have also Edi Schmid, our Group Chief Underwriting Officer, to answer your questions. So with that, operator, could we please have the first question?

Question and Answer

Operator

The first question is from Edward Morris from JPMorgan.

Edward Morris

JP Morgan Chase & Co, Research Division

2, please. The first is on Life & Health. I wonder if you could just talk a little bit more about the performance that actually seemed to be suggesting that the capital generation under EVM and Solvency Swiss SST seems to be very strong. So I just wonder if you can talk a little more about that and then maybe anything that we can't see just from the -- our first -- sorry, U.S. GAAP net income figure? And the second question is on your comments about future actions on capital management. Seems to be a sort of slight change in tone from the way you've talked about things previously, though, I appreciate you're still referring back to the Group priorities. But can you just talk a bit about what you mean there, and is there any sort of timing that you may have in mind or something?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thank you. John, you want to start?

John Robert Dacey

Group Chief Financial Officer

Sure. I think I'll probably take both of those. On Life & Health, I think we've been trying to emphasize 2 things. One, based on some important restructuring we did in Life & Health Re in 2013, 2014, we put ourselves on a path to long-term profitability. You see that in the U.S. GAAP results, which have met the target we put out of 10% to 12% ROE. But more importantly or as importantly from our point of view is the continued progress of our EVM results on the Life & Health side. We haven't released those for 9 months, but have reached back all the way to year-end 2017. I think you'll see a continued positive movement in the EVM earnings of Life & Health that actually exceed U.S. GAAP and demonstrate that -- what we're putting on the books today provides the opportunity for future earnings, which will come through the U.S. GAAP's accounts as these portfolios continue to mature. So -- and since the EVM is the basis for the calculations on the SST, that's where you see the positive impact coming through as well. Vis-à-vis capital management. I'd say the tone is not materially different. We've said for quite some time, our goal in the first case is to protect the dividend to be sure that we are able to fund new business opportunities, deploy the capital organically in the first case, inorganically should the opportunities arise. We've demonstrated the examples of this with the bolt-on acquisitions we've done in Corporate Solutions. And at the end of the day, if we find ourselves with more capital that we can successfully deploy on a value-creating basis, we will return it to shareholders. We started the buyback program in 2018 and without the caveats that we've had in previous years, we're well along in that share buyback program. With respect to any capital management issues regarding 2019, I think it's safe to say we'll wait for our full year results and engage in the appropriate discussions with our own Board of Directors and let people know subsequently.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thank you, John. Thank you, Ed, for your questions.

Operator

The next question is from Gandhi, Vikram from Societe Generale.

Vikram Gandhi

Societe Generale Cross Asset Research

Firstly, can I just check how far is cost as aggregate cover from attaching? And if you've already had some breakup of this, can you share how far is it from the point of exhaustion? Secondly, given some of the recent court rulings in the U.S., can you shed some light on your comfort level around the Group's asbestos results?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Maybe, Edi, do you want to take that question?

Edouard Schmid

Group Chief Underwriting Officer

So the first one, Vikram, is on CorSo's aggregate cover we put in place, as we mentioned in previous calls, to protect the portfolio a bit better, not just from similar type of events, although it also puts us in place that protects them against the series of midsized hurricanes. And so far, we have the Hurricane Florence, which is closed as a total for \$120 million, and about half of that is in CorSo. So CorSo is still well protected by the aggregate. So it's not yet close to that aggregate cover here. I mean, that's how I'd describe the situation. And the second is around A&E reserves. And actually, our P&C Re reserves in the third quarter are a tiny bit negative, and that's what's the reason as we strengthened A&E to some extent in this quarter. Overall, we think we are now fine in line with all the different benchmarks we used to, to set A&E reserves. So yes, that's how I'd describe A&E.

Operator

The next question is from Thomas Seidl from Bernstein.

Thomas Seidl

Sanford C. Bernstein & Co., LLC., Research Division

First, ReAssure Life Capital suffers from the weak U.K. capital markets. I wonder if you could give us an update on how this would influence and where you are actually in your preparations to IPO ReAssure. Is it getting more difficult now? And how are you doing there? And secondly, I go back to this capital thing. I mean, with this SST ratio you published today, you have \$11 billion of excess capital according to our own metrics. So you would need to write another \$11 billion of premium to consume this capital, which probably is not likely in the next couple of years. So what keeps you actually from making a more significant, let's say, bring down by \$5 billion, \$6 billion?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

John, that's for you.

John Robert Dacey

Group Chief Financial Officer

It's John. I'll take both of these. With respect to the IPO, what I can see is the preparation continues to pace. I really have no new insights for you compared to where we were in August. We specifically said we would expect to be able to go to an IPO sometime in 2019 without being very specific about precise timing. Obviously, we will pay attention to market conditions, but that's not new. It's exactly what we've told you back in August. So again, nothing changed there. With respect to capital, I take your point that 285% is quite some distance away from 220% and arguably is moving at least on one dimension further away during the course of 2018, at least as of July 1. The year is not over, and let's see where we actually land the year. But the opportunities for us to rethink where the capital is required will continue to be a point of discussion for the executive committee and ultimately the board of the Group. I will suggest that one of the reasons why this number remains relatively high relates to our defensive posturing on asset risk. We remain in a range that's defined by our strategic asset allocation. So there has been no fundamental change in the ranges that we've put on since the beginning of the year. But we remain cautious in accepting additional asset risk. You could imagine situations where some combination of

opportunities for writing new reinsurance and then primary insurance business plus a -- some increases in asset risk in the future would provide opportunities to deploy a substantial amount of this capital.

Operator

The next question is from Sami Taipalus from Goldman Sachs.

Sami Taipalus

Goldman Sachs Group Inc., Research Division

My first one is actually coming back to the capital generation in the first half, which was very strong. Is it possible to give just a little bit more of a breakdown of what was behind that capital generation? I mean, you already alluded as it does a little bit to the Life & Health Reinsurance new business. But if it's possible to just potentially split out the market movements or management biases or anything like that, that would be helpful. Then the second thing comes back to your, I suppose, comments about bidding capacity. You linked the -- like I suppose, capital returns to the SST ratio somewhat in the statement. Is that how we should think about it? Or should we -- do we also need to cross-check it against the capital you have available at the holding company level? Because I guess, the 2 are not necessarily directly linked.

John Robert Dacey

Group Chief Financial Officer

So Sami, to your latter point, yes, there are multiple dimensions, which we evaluate. The dividend capacity of the Group SST is clearly one of them, the available capital that we do have at the holding company. Second, an overall liquidity position, I'd say at the moment, we remain in fairly robust shape on most dimensions. And so that's the starting point, and frankly, a good place to be in these times where we've started to see some increase in volatility both in financial markets and some real losses coming through in the third quarter on the insurance side. We're not providing much more detail about the development of the SST at 6 months. I'd remind you that 285% is an estimate. We think it's probably a pretty good estimate, but it's not been audited. It doesn't go through the same rigor that we have for the full year results. And therefore I think my comments before about relatively modest levels of asset risk in the big picture and a clear capital generation of our first half business, including the Life & Health, is about as much details we're prepared to provide at this point.

Operator

The next question is from Andrew Ritchie from Autonomous.

Andrew James Ritchie

Autonomous Research LLP

I think my question is for Edi. First of all, could you give us an update on the reunderwriting at CorSo? Well, both, I guess -- both partly the reunderwriting you were planning to do the portfolio clean-ups and so also progress on achieved average increasing rates you've managed in CorSo to date. And secondly, can I just follow up on the reserve comment you made for P&C Re. I think there was some adverse outside of the asbestos review. Is that the same problem areas as in the first half, which I think was particularly U.S. also related liability? It is something new in this part of the sort of lumpy review process? Just I think a bit more color on state reassurance will be helpful, please.

Edouard Schmid

Group Chief Underwriting Officer

Yes. Thank you, Andrew, for these 2 questions. So the first one around reunderwriting, both P&C and CorSo, I think what we highlighted over the last few quarters is that we took quite a different view, particularly on U.S. motor, that's a bit older, but also on U.S. liability. And there particularly when it comes to large corporate risks, it seems just significant large verdicts and settlements. So in our portfolio prioritization, clearly, U.S. liability is very much prioritized for what we call risk reduction, margin improvement and not for growth. And on the other hand, motor insurance business, the property cat business with rate stabilization, even some rate increases, we have started to grow that business a little bit further and actually are on a good track to achieve these portfolio actions, and that over time, it will

also help the underlying combined ratio. So there is no change in this prioritization. We'll continue also on this path into 2019. And on the second one regarding the P&C Re reserves, so for 9 months overall, reserves development for P&C Re is positive. It's just the third quarter, it's a little bit negative. And one comment I made, which strengthened asbestos is uneventful a bit. And the other contributor is actually some man-made losses from previous acts in the years that had to be strengthened this time on the P&C Re side. But we don't see any, let's say, underlying evolving trends and we continue to be very confident with the overall results assessed independently at the Group actual control level in the 60% to 80% range. So A&E was strengthened a bit in Q3 and a couple of man-made losses from previous accident years in the U.S. will strengthen. So that explains the tiny negative, but overall, still in the positive territory for P&C Re.

Operator

The next question is from William Hawkins from KBW.

William Hawkins

Keefe, Bruyette & Woods Limited, Research Division

First of all, in Christian Mumenthaler's closing remarks in your press release, you've referred to an inflection point in the P&C reinsurance pricing cycle. Could you elaborate on the extent to which that's a confident forward-looking statement? Because we know the rates increased in the first half of this year, but my understanding was the momentum was very much coming back, if not actually back in a declining mode into January. So could you just discuss a little bit more what you mean by an inflection point for pricing? And then secondly -- clearly, we don't have all the detail for the 9 months or third quarter. So it's a bit tricky. But you told us very clearly that P&C Re has had some pretty big knockouts. You talked about negative reserve development. My inference from that is that the underlying attritional experience has been extremely good since you last reported. Is that kind of fair? And if so, why has the underlying expedience excluding capital and reserve development been so good?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thanks. I think, Edi, this is all for you.

Edouard Schmid

Group Chief Underwriting Officer

Thanks, William, on the first one regarding the inflection point. Maybe if you go back after the record losses in 2017, there clearly was an expectation that there will be a significant inflection point, particularly for P&C Re. We have achieved in our business in P&C Re, on cat business and other parts some improvement, maybe not as strong as expected. And it's fair to say that momentum was not too strong throughout the year. When we talk about the inflection point, I think it's more important not just to look at reinsurance, but to look at P&C business globally. And there over the course of the year, if you look at all the indices produced, you clearly see positive rate trend now in the commercial businesses. It was still a bit slower in the first 6, 9 months. Just more recently, we see even a bit more momentum there in markets like Australia, markets like Germany, where clearly that's more paying than before, we actually see positive momentum. And that paints this picture of an inflection point. And then we'd also refer to a sigma study we released a couple of months ago where we analyzed by the institutes the 5, 6 biggest P&C markets overall. And there, you can clearly see that if you want to achieve a sustainable return on equity above cost of capital, these P&C markets overall, so really the original business, there's guite a bit of underwriting margin. So this picture together with the losses we see this year, development fee in many markets, we feel this is an inflection year. And then on your second one is the combined ratio for P&C Re at 99.5%, I think it's important to look at it on a normalized basis. We have this significant loss burden from nat cats from man-made, but it's important to differentiate the first 6 months were actually very benign. We had hardly anything on the reinsurance side. And Q3, as it's anecdotally above average, but you can take everything together, both nat cat and man-made, this loss burden is broadly in line with what we would expect for the year. And that's also why we still feel the target or the estimate we gave for the full year of 99% combined ratio, we are set to achieve this over the full year. Maybe

what is important to reflect that actually that the third quarter is quite a heavy one in terms of nat cat exposure. So also we earned a lot of the margin in that year. That's make it a hint on why the combined ratio could be a bit lower in your analysis. And also what I referred to before, we continue to have a rather cautious stance on U.S. cash flow business, while we try to do a bit more on property cat again, which will also help the combined ratio a bit -- to trend a bit more to the lower end. And then, obviously, we have achieved underlying improvements in the P&C Re book. The quality is improving, but that takes time to earn through, but we start to see some impact of this. So the bottom line is, overall for this year, we still think the 99% combined ratio P&C Re is a good estimate.

Operator

The next question is from Kamran Hossain from RBC.

Kamran Hossain

RBC Capital Markets, LLC, Research Division

All right. 3 questions. The first one is just on, I guess, the different, I guess, first one is for Edi. It's on a difference in renewals and the dynamics between, I guess, 1:1 and 1:4 and kind of how you think this might impact the 99% combined ratio starting point that you just talked about, so first question. And the second question, just coming back to ratio ahead of any potential IPO next year, can you just remind us is there any additional, kind of pockets or caps or anything, any kind of capital optimization that you might be able to do and kind of dividend not to creep ahead of that?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Edi, you start it, and John, I guess.

Edouard Schmid

Group Chief Underwriting Officer

Thanks for the question. Let's say the different renewal timing, so you referred 1:1 and then 1:4. Maybe you also meant to include 1:7 here. So we had 1:1 where we only had moderate price increases, was mainly the European book. Then we had Japan, 1:4 with, I think, the picture was largely flat and then we had probably some improvements and also, without reasons, flattish into 1:7. So actually it was not a very different pattern across this Re renewal cycles. But what again is important to understand is how this business is earned. So it's the lack in terms of new cycles, and that is how the business is earned on a get basis. So this year, still we earn about 50% of the business written in 2017, where there was rather some quality reduction. And now the business growth this year, 50% of this improved business will only be earned into 2019, as always, descattered. Now it will turn on 1:1, that remains to be seen. We still expect a flattish type of environment. There's still capital out there in quite abundance, that's fair to say. As I explained before, there is also losses, there is pain in the system. So for P&C Re, a flattish outlook, I think, is the least we expect.

Kamran Hossain

RBC Capital Markets, LLC, Research Division

So Edi, my question actually relates -- to the first half is related to kind of your different -- difference in upcoming dynamics for 1:1 versus 1:4, I just feel like 1:4 and 1:7 is a little bit far away.

Edouard Schmid

Group Chief Underwriting Officer

Yes, so the only point I would make in this respect, obviously, there are significant losses out of Japan with Typhoon Jebi, where we said it's about \$6 billion market events and our share is about \$500 million. And there are also smaller losses. So that will clearly drive the dynamics of the 1:4 renewal, which is mainly a Japanese one. And 1:1 is mainly Europe where it was not significant loss activity. So there is this flat picture. It's probably a fair view.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thanks, Edi. John, on the ratio?

John Robert Dacey

Group Chief Financial Officer

On ReAssure, again, not a lot to say. These will be the actual IPO processes that we continue to move ahead as planned. The one that I would say is the -- Life Capital as a division demonstrated a continued strong gross cash generation up to \$1 billion for the first 9 months here. And among other things, this provides opportunities for some flexibility as we think about why capitalization levels and potential dividends before or after IPOs, but the IPO itself is -- there's no real news on them.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thanks, Kamran, for your questions.

Operator

The next question is from Frank Kopfinger from Deutsche Bank.

Frank Kopfinger

Deutsche Bank AG, Research Division

I've got -- after everybody asked, I've also 2 questions. My first question is on your tax effects. Obviously, if -- whenever you have a high loss burden, there's some sort of offset to our tax effect. Can you shed some light on how big they have been in Q3 in P&C and CorSo? And then secondly, can you also provide some first view on Hurricane Michael and your potential loss there?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

All right. It'll be John on tax and Edi on Michael.

John Robert Dacey

Group Chief Financial Officer

So on tax, you're right, the geography, which absorbs the losses, has a different tax impact. I would simply suggest we are in a little different world. With the U.S. corporate tax down to 21%, the variations are smaller than they used to be. We have put in place the Swiss Re Asia Ltd regional coding company in Singapore, which has a even lower tax rate. So some of the tax loss carryforwards from losses that would be booked through Singapore might be even more modest than the 21% that we'd see in either Switzerland or the United States. But net-net, our goal is to make money here. And the after-tax effect, how important to us is less important that we get back on our feet in terms of the underwriting. On Michael, maybe I'll just jump in for Edi. We really can't say anything yet about what those losses might be. They will be part of the fourth quarter, and we've got no clear line of sight of either our position or frankly our own Swiss Re estimate. You've seen the market estimates here between \$6 billion and \$10 billion. That does not feel reasonable. Edi, you might have additional view.

Edouard Schmid

Group Chief Underwriting Officer

I also have quoted some of these loss estimates from \$6 billion to \$10 billion. That's not unreasonable. But I would also point out that Swiss Re is a little bit underrated in Florida, we have commented in the past. So as John said, it's too early to come up with any specifically at this point. But also as we said, we still think the 99% combined ratio is a reasonable expectation for the full year. So I think that describes the picture.

Operator

The next question is from Jonny Urwin from UBS.

Jonathan Peter Phillip Urwin

UBS Investment Bank, Research Division

2 quick ones. So firstly, how is the profitability of the casualty book developing in recent underwriting years versus your expectations, please? And secondly, what's your appetite growth in both P&C Re and CorSo? Going into 2019, should the pricing environment be flat and should we expect any mix changes in P&C?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Edi, you want to take the 2 questions?

Edouard Schmid

Group Chief Underwriting Officer

So the first is on casualty. Quality of the portfolio, as I commented on earlier, particularly in the U.S. markets on the motor side, but also on the liability side, portfolio is where we push forward for risk reduction for margin improvements. We have achieved some of that this year. We still think that market has to improve further. I think the pain is increasing in U.S. liability. But as always, I will not make too many forward-looking comments on how it turns out. Your second question is more about the outlook in terms of growth. I would also there reiterate what we said earlier was, let's say, a flattish price environment. The quality of our book in a good shape, although capture opportunities be it on the transactional side versus some of the core business, cat business we clearly have appetite, we like that business. So it's a stable pricing with further slight increases. We'll also grow in some of these segments. Overall, there is potential for growth, but it goes without saying that we will still do that with underwriting discipline.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

All right. Thank you, Jon, for your questions.

Operator

The next question is from Vinit Malhotra from Mediobanca.

Vinit Malhotra

Mediobanca - Banca di credito finanziario S.p.A., Research Division

First question, please, just maybe a bit of extra comment, please, on Corporate Solutions where the 1H growth was 18.5%. And in the 9 month, it is 9%. Is this just normal volatility? Is it just -- is it that the management change in CorSo, you're making a step change or you're planning some step changes? Just to hear some thoughts on CorSo growth, please, in the first half and 9 months. And second question is just a bit more -- in last night's reporting, AIG has flagged that they expect a lot of the fourth quarter losses to come to the reinsurance market, because their attachment points are being hit. I mean, generally, do you think there's been bit more aggregate sort of covers being sold to clients from your perspective or market perspective? And are these some things that are going to be important as we think of the next year, but also our fourth quarter?

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Edi, you take both questions?

Edouard Schmid

Group Chief Underwriting Officer

On the CorSo growth, 18% versus 9%, so 9% is for the first 9 months. So that's in line with the strategy to grow that book. And most of that comes from the primary lead initiative, which starts to bear fruits. And we'd again also point to the joint venture, Bradesco in Brazil that adds to the growth. The reason why

this is more in the first 6 versus now is a one-off effect, but I don't want to go into the detail there. And the second one, regarding this AIG comments, we'll not comment on any company individually. But your comment was more regarding aggregate covers in the markets and aggregate cover is nothing new and have been around for a long time. History has witnessed some of those and would also continue to do so. It can be a very good mean to take out volatility from an insurance company. But obviously, it will be underwritten with the necessary rigor. All we have to be careful at this point in time that as a reinsurer, you should not take, let's say, the bad part of the business away from the CD company. So it is -- just has to make sense. But aggregate as such is a valuable reinsurance tool. We used to support our insurance company clients with the necessary underwriting discipline. That's a product where actually we made decent returns over many years.

Philippe Brahin

Head Investor Relations and Head Governmental Affairs & Sustainability

Thank you, Vinit, for your question. Actually, they are the last questions of the day. So we've come to the end of our Q&A session. Thank you very much to John and Edi. Thank you also for -- all of you for joining us today. Don't hesitate to reach out to any member of the Investor Relations team for follow-up questions. Thank you again for your participation today. Operator, back to you.

Operator

Thank you for your participation, ladies and gentlemen. You may now disconnect.

Copyright © 2018 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.

These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable. No content (including index data, ratings, credit-related analyses and data, research, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Global Market Intelligence or its affiliates (collectively, S&P Global). The Content shall not be used for any unlawful or unauthorized purposes. S&P Global and any third-party providers, (collectively S&P Global Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Global Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON "AS IS" BASIS. S&P GLOBAL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Global Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages. S&P Global Market Intelligence's opinions, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Global Market Intelligence may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Global Market Intelligence assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Global Market Intelligence does not act as a fiduciary or an investment advisor except where registered as such. S&P Global keeps certain activities of its divisions separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P Global publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

© 2018 S&P Global Market Intelligence.