# **S&P Global**Market Intelligence

## Root, Inc. NasdaqGS:ROOT

## Earnings Call

Wednesday, February 21, 2024 10:00 PM GMT

CALL PARTICIPANTS	2
PRESENTATION	3
OUESTION AND ANSWER	6

## **Call Participants**

#### **EXECUTIVES**

#### Alexander Edward Timm

Co-Founder, CEO & Director

#### **Matthew Patrick LaMalva**

Head of Investor Relations

#### **Megan Nicole Binkley**

Chief Financial Officer

#### **ANALYSTS**

#### **Elyse Beth Greenspan**

Wells Fargo Securities, LLC, Research Division

#### Joshua Michael Siegler

Cantor Fitzgerald & Co., Research Division

#### **Michael Augustus Ward**

Citigroup Inc., Research Division

#### Thomas Patrick McJoynt-Griffith

Keefe, Bruyette, & Woods, Inc., Research Division

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

#### **Presentation**

#### Operator

Good afternoon, and welcome to the Root, Inc. Fourth Quarter 2023 Earnings Conference Call. Please note that this call is being recorded. [Operator Instructions] I will now turn the call over to Matt LaMalva, Head of Investor Relations. You may begin your conference.

#### **Matthew Patrick LaMalva**

Head of Investor Relations

Good afternoon, and thank you for joining us today. Root is hosting this call to discuss its fourth quarter and full year 2023 earnings results. Participating on today's call are Alex Timm, Co-Founder and Chief Executive Officer; and Megan Binkley, Chief Financial Officer.

Earlier today, Root issued a shareholder letter announcing its financial results. While this call will reflect items discussed within that document, for more complete information about our financial performance, we also encourage you to read our full year 2023 Form 10-K, which was filed with the Securities and Exchange Commission earlier today.

Before we begin, I want to remind you that matters discussed on today's call will include forward-looking statements related to our operating performance, financial goals and business outlook, which are based on management's current beliefs and assumptions. Please note that these forward-looking statements reflect our opinions as of the date of this call, and we undertake no obligation to revise this information as a result of new developments that may occur. Forward-looking statements are subject to various risks, uncertainties and other factors that could cause our actual results to differ materially from those expected and described today. In addition, we are subject to a number of risks that may significantly impact our business and financial results. For a more detailed description of our risk factors, please review our Form 10-K for the year ended December 31, 2023, as well as our shareholder letter.

A replay of this conference call will be available on our website under the Investor Relations section.

I would also like to remind you that during the call, we will discuss some non-GAAP measures while talking about Root's performance. You can find reconciliations of these historical measures to the nearest comparable GAAP measures in our shareholder letter and our Form 10-K filed with the SEC, both of which are posted on our website at ir.joinroot.com.

I will now turn the call over to Alex Timm, Root's Co-Founder and CEO.

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Thank you, Matt. We closed out 2023 with another quarter of significant increases in gross written premiums and direct contribution, along with continued excellent loss ratio performance, resulting in the best quarter the company has ever produced across almost every metric in the business. I want to take a couple of minutes to walk you through the transformation Root has successfully undergone over the past couple of years and why this transformation has us very excited for the future.

Just over 2 years ago, we underwent a crisis as we saw used car prices soar and observed the worst inflationary environment in recorded history. It was clear that we needed to pivot our business. This entailed making a number of decisions that, while difficult in the near term, were ultimately the necessary and correct decisions to ensure we evolved our company and positioned ourselves to be able to fully disrupt the auto insurance industry. To do this, we crafted a 3-step plan. One, drive toward healthy margins on our business by hitting our target loss ratios; two, materially lower our fixed expenses; and three, efficiently grow to scale in order to drive profitability.

Fast forward 2 years, and we believe the transformation is remarkable. For the full year 2023, we restarted our growth engines, increasing gross written premiums by 31% and policies enforced by 55%.

We generated a Direct contribution of \$151 million. That's nearly a 20x expansion from just 2 years ago. We recorded a gross accident period loss ratio of 66% and a gross combined ratio of approximately 116%, both major improvements while also validating our efforts to enhance our tech and data capabilities.

To that point, for the past 3 quarters, our loss ratios have been among the best in the entire auto insurance industry. Most importantly, we invested considerably in our technology and data science to significantly enhance our underwriting and pricing capabilities. As a result, we enter 2024 believing we have achieved scale in our business, which provides us the ability to make decisions for the long-term success of Root. Specifically, we plan to look for opportunities to profitably gain market share or quickly shift our focus if we determine that growth may not achieve our target returns.

We could not be more excited for the long-term potential of Root, and here's what you should expect to see from us as the new year progresses.

First, we see the opportunity to continue growth in 2024 and expand our market share. We expect the Direct channel to continue to benefit from our machine learning approach to targeted and automated customer acquisition as well as our significant advancements in pricing and underwriting. We'll continue to invest our marketing dollars to achieve target returns and respond as we see changes in the competitive landscape. We also expect to grow through our Partnership channel where we will continue to focus on launching additional partners in 2024. The Partnership channel provides potential customers with a differentiated experience at contextually relevant times, which we believe will ultimately be foundational to our long-term diversified growth strategy.

As we have achieved our target loss ratio and established a scalable expense base, we believe our ability to reach profitability is now largely dependent on the level of our investments in discretionary marketing. Root's future looks brighter than ever as we continue to profitably and efficiently grow and scale our business. We continue to build an enduring company and are making excellent progress in our mission to unbreak insurance through our data science and technology. We knew when we started Root, it was going to be a long journey, carving a new approach into an industry that has been untouched for almost 100 years is hard. The challenges of the past 2 years have galvanized our team, who believe in our mission and vision more than ever.

We are disciplined, focused and above all, passionate about constantly delivering value to our customers. We remain grateful to our customers, employees and our shareholders for their continued support.

I'll now turn the call over to Megan to discuss our operating results in more detail.

#### **Megan Nicole Binkley**

Chief Financial Officer

Thanks, Alex. Overall, it was a very strong end to 2023 with further improvements on both our top and bottom lines. Our growth continued with total new writings and policies-in-force higher on both a quarter-over-quarter and year-over-year basis. Gross written premium was \$279 million, a 25% increase quarter-over-quarter and a 129% increase year-over-year. Gross earned premium was \$214 million, a 34% increase quarter-over-quarter and a 50% increase year-over-year. We achieved this growth while also posting a gross accident period loss ratio of 66% for the fourth quarter. Once again, steady on a quarter-over-quarter basis and an 11-point improvement year-over-year. This was predominantly driven by our pricing and underwriting advancements.

Our evolved reinsurance strategy continues to benefit net results through increased retention and lower reinsurance costs. Consistent with prior guidance in Q4 2023, our gross earned premium cession rate was 18%, and the gap between gross and net loss and LAE ratios was reduced to single digits. During the fourth quarter, our net loss was \$24 million, a 59% improvement year-over-year. Adjusted EBITDA improved 99% over the prior year to a near breakeven loss of \$300,000. Compared to the third quarter, our net loss improved 48% and our adjusted EBITDA loss also improved 99%. These improvements were mostly the result of the growth in net earned premium as well as favorable loss development recorded in the quarter.

The favorable loss development was primarily driven by better-than-expected emergence on injury coverages for the 2023 accident year, and we don't expect this degree of favorable prior period development going forward. These impacts were partially offset by higher acquisition investment during the quarter. And as we've noted, we do not defer the majority of our customer acquisition costs over the life of the customer, which leads to accelerated expense recognition relative to earned premiums.

Overall, our results for the fourth quarter and for the full year 2023 continue to reflect the sustained momentum towards management's top priority of reaching profitability with our existing capital.

Unencumbered cash was \$507 million as of the end of 2023 compared with \$559 million as of the end of 2022, reflecting an annual usage of \$52 million. Our unencumbered cash consumption rate improved on a year-over-year basis following our continuous pricing and segmentation improvements and the reset of our fixed expense base, and was partially offset by an increase in customer acquisition costs as we continue to position the business for profitable growth.

As Alex stated, 2023 was a transformative year for Root, as we return to growth, recorded sustained improvements in our loss ratio, appropriately aligned our fixed expense structure and pivoted our reinsurance strategy going forward. As a result, we are entering 2024 in a position of strength, and we will continue to be mindful of our underwriting and expense management in order to remain on the path to profitability.

We are excited for the future. We appreciate your time and look forward to your questions.

## **Question and Answer**

#### Operator

[Operator Instructions] Your first question comes from Josh Siegler with Cantor Fitzgerald.

#### Joshua Michael Siegler

Cantor Fitzgerald & Co., Research Division

Nice results here. First, can you give any insight into what trends you're seeing year-to-date, specifically around severity, frequency? And how are you really expecting loss ratios to trend in the beginning of 2024?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes. Thanks, Josh. We're continuing to see our loss ratio really progress nicely. And we are seeing severity up continually this quarter and some improvements in frequency trends as well. On severity, we're seeing used car prices, they've started to come down a bit, but really used car parts, labor, medical, we're still seeing some healthy inflation there on the severity side. Frequency, we continue to get better at segmentation and pricing, and we continue to iterate on our data science platform. And we've seen, and you can see this historically, we've seen really nice trends in our frequency as we continue to do better at segmenting our book. And so we're very happy with where our loss ratio is. It is one of the best in the industry at this point. And so we believe we can continue in 2024 at these sustained levels.

#### Joshua Michael Siegler

Cantor Fitzgerald & Co., Research Division

Got it. That's helpful. And as a follow-up to that, with these healthy loss ratios, even amongst new cohorts, it sounds like you're in growth mode right now. Are you thinking about accelerating that growth as we start the new year in 2024? And what would have to happen for you to change your mind and really shift towards that profitability angle instead?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

What I'd say, we are constantly focused on gaining profitable market share. So for us, we don't think it's growth or profit, we are really focused on driving new business at our target return levels. And so we're going to continue to do that. And what our machine does is, it's constantly looking to see how the competitive environment is evolving. We have seen some competition come back into the market year-to-date, and we're still growing. So we're -- and we continue to invest too in lots of other growth levers in the business. We've added multiple additional partners now already this quarter in the business. We're very excited about our Partnership channels and our embedded product.

We're going to continue to improve pricing and underwriting, which we believe ultimately will allow us to have a pricing advantage in the market and continue to grow. And we're now looking at marketing channel expansion as well as expanding our state footprint. So we are definitely focused on growth, but it's definitely profitable growth. If we see anything that gives us any pause on the profitability of the business that we are adding to our book of business, we will certainly pull back, and that's what would cause us to shift towards driving more towards near-term profitability.

#### Joshua Michael Siegler

Cantor Fitzgerald & Co., Research Division

Congrats again on the results, really strong quarter here.

#### Operator

Your next question comes from Yaron Kinar with Jefferies.

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

Sorry. Are you able to hear me?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes, we can hear you.

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

Okay. Great. Congrats on a good quarter here. So my first question, just looking at the strong loss ratio clearly, can you maybe talk about the rate adequacy? Are there still pockets where maybe you feel like you need a little more rate? What's your expectation for rate increases would be for the coming year?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes. We're currently pricing to sort of a high single-digit trend and we're prepared to respond. We're always monitoring the inflationary environment. Clearly, I think as 2023 has shown, in a high inflationary environment, we know how to respond and react and certainly deliver on loss ratios. If there is abatement in the inflationary environment, we think that could certainly be a tailwind to the business as well.

Right now, broadly, though, we believe we're rate adequate across the vast majority of our footprint. And so we feel very good about where we're positioned today.

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

Got it. And then I guess my second question, obviously, we saw a very significant loss ratio improvement, at the same time that we're seeing new business as a percentage of the overall earned premium increase. I often think about a new business penalty that we often see in the industry. Can you maybe comment on that? Can you try and quantify it? And I guess what I'm trying to get at here is the level of improvement, I guess, is even more impressive considering the amount of new business that you achieved.

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Thanks, Yaron. Yes, I would say we definitely -- the mix of our business being more new and less renewal and even that our renewal business is actually relatively younger than what you might see generally in the industry, definitely is a headwind to our loss ratios because we do see some, as you referred to it, the new business penalty. It's not huge. It's single digits right now. And really, as we've continued to progress, particularly on our machine learning underwriting models and really has started to also improve our segmentation, we've really been able to bring that first term loss ratio down fairly materially. And so we feel good about that. It certainly has allowed us to scale much more efficiently.

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

Got it. And then one final one, if I could. The prioritization of growth into '24, it sounds like you are prioritizing Direct over the embedded channel. And I guess, one, is that a fair assessment? And two, maybe you can talk about the strategy of why the strategic prioritization of Direct over embedded here?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes, that's a good question. First, I would say we love the Direct channel, and we love the embedded and Partnerships channel. Really, we want to grow both channels as fast as we can, provided that again, we are hitting our profitability targets. And our product shows up a bit different in both channels, right? Our

ease of doing business, our ability to generate a quote and bind in under a minute, we know that, that's very valuable for customers when they show up on our website or when they show up on our app. Also turns out that's very valuable for embedded partners when you want to offer insurance to your customers in a seamless experience in as little as 2 or 3 clicks.

So for us, we are prioritizing diversified distribution. We are continuing to build and are very excited about the long-term potential of our Partnership and embedded platform. We do believe we have product differentiation there as has been evidenced by the material improvement in attach rates that we have seen on the Carvana platform, and we're going to continue to scale that. That said, Direct is large, started from a much larger base. And the Internet is a big place. And we don't think the Direct channel is going to go away overnight. And so for us, I wouldn't say that we're prioritizing Direct over embedded or Partnerships by any means. I would say that we are really pursuing diligent growth in both channels simultaneously.

#### Yaron Joseph Kinar

Jefferies LLC, Research Division

Congrats again on the quarter.

#### Operator

Your next question comes from Tommy McJoynt with KBW.

#### **Thomas Patrick McJoynt-Griffith**

Keefe, Bruyette, & Woods, Inc., Research Division

The first one here, we have heard some commentary from several of the sort of customer acquisition solution providers. And it sounds like the reset of the calendar year in January resulted in a number of auto insurers reengaging in their customer acquisition spend goals. Root's obviously been very successful in the second half of 2023 with their pretty efficient customer acquisition. But have you noticed any sort of step change in that efficiency in January and February, just from a matter of more competition from some of the other auto insurers out there? And just is there a way to track your acquisition cost per policy that you've seen acquired?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes. I would say you're right, we have seen competition return into the Direct space, and we have seen that from a few competitors, particularly starting to ramp up in the first quarter. That said, in 2023, we made material improvements to our marketing machine and we are actually still seeing growth through this year-to-date in PIF. So even with the increased competitive environment, we're still able to grow. And we are actually beating our efficiency targets still when we measure for us, what we really focus on is our return on marketing spend, and we are still actually hitting and exceeding that target even with the competition coming back.

#### **Thomas Patrick McJoynt-Griffith**

Keefe, Bruyette, & Woods, Inc., Research Division

Okay. Got it. And then my second question, your unencumbered capital has trended pretty flat at just about \$500 million for most of 2023. And that's obviously been at a time when you saw your net earned premium almost triple from the first quarter to the fourth quarter. Have you had to invest or inject any capital into your regulated insurance subsidiaries? And if not, is there a level of net earned premium that those insurance subsidiaries can support just based on either statutory or rating agency guidelines?

#### **Megan Nicole Binkley**

Chief Financial Officer

Yes. Tommy, I appreciate the question. So you're right. Our unencumbered cash has been around \$500 million for the last couple of quarters. And I think if you take a step back and you look at our consolidated Q4 total cash and investments, that was up \$45 million over Q3. And that's really been

primarily attributed to the growth that we've seen, right? The increase in premium and fees that we've collected as well as we're investing that unencumbered cash. So we've been taking advantage of the rate environment and we've been able to generate some investment returns.

So when you look at our results from a 2023 perspective, I mean, we have made just material improvements in our underlying results. And that really puts us in a situation where we're not contributing as much capital down to our insurance subsidiaries as we would have been in 2022. We believe that we're in a good capital position as of the end of 2023. Our regulated insurance companies have more than the required capital. They're appropriately capitalized, and we're continuing to see book value growth in our insurance subsidiaries.

#### **Thomas Patrick McJoynt-Griffith**

Keefe, Bruyette, & Woods, Inc., Research Division

Okay. And then if I could just sneak one last one in. Do you have what the cession rate will be for what you'll be writing in 2024? I know in the third quarter it was 10%, but I think there was some commutation impact there and the fourth quarter it was 18%. Just what's the expectation for 2024? And then is that subject to change? I forget when your reinsurance contracts come up for renewal.

#### **Megan Nicole Binkley**

Chief Financial Officer

Yes. Great question, Tommy. I mean, if I take a step back, we did commute several of our in-force multiyear reinsurance treaties between the span of Q2 and Q3 with the goal of retaining more profits. So you are seeing a bit of a shift compared to where we were in Q3. But as I take a step back, I mean, our approach to reinsurance really continues to be a key focus for us. We're going to continue to buy the true risk reduction cover. So that's our CAT and XoL. We're going to continue purchasing those covers to protect the business from large losses and tail risk events.

And on the quota share side, we do plan to continue reducing our quota share cessions from where they were for the full year 2023 into 2024. As we guided to, actually during the Q3 call, we do expect to seed less than 25% of our gross written premium going forward. And therefore, you're going to see a reduction of our reinsurance costs. This quarter, you actually started to see, as a result of our reduced cessions and the better terms that we've gotten on our 10-1 cohort deal, you're seeing greater convergence of our gross and net loss and LAE ratios. So we do continue to expect to see less than 25% of GWP going forward. And in the event that conditions change, we do want to maintain the flexibility to make changes to our reinsurance program as needed.

You alluded to this in your question, but we do have multiple decision points throughout the year where we can decide to increase or decrease our cessions. But overall, we believe that the reinsurance strategy changes that we've made really further support our underwriting profitability for the long term.

#### Operator

[Operator Instructions] Your next question comes from Elyse Greenspan with Wells Fargo.

#### **Elvse Beth Greenspan**

Wells Fargo Securities, LLC, Research Division

My first question is just on the frequency side. So in your shareholder letter, right, you guys alluded to frequency declining by 4% in the fourth quarter, which is an improvement, right, from where things were trending in the Q3. I think some other carriers did point to favorable frequency, especially to end the year. Do you guys have a sense of the favorable frequency trends that might have benefited your results in the fourth quarter?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes. Thanks, Elyse. I would say the fourth quarter is a lower frequency quarter, generally driving us down in the winter months and then sort of up in summer months. But that -- the frequency trend that we

saw was also year-over-year. And so we think a lot of it is our mix of business as we continue to improve and train our models and rapidly deploy our models both on underwriting, on telematics and on our loss cost models that we can continue to effectively drive a better mix of business. And so we have seen frequencies continue to come down even on a year-over-year basis. So I don't think what you're just seeing there is seasonality.

#### **Elyse Beth Greenspan**

Wells Fargo Securities, LLC, Research Division

And then in terms of you guys talking about a path to profitability, right, with your current capital position. Can you help us just think about the glide path from the results in '23 to getting to profitability in terms of number of years or some kind of time frame that you want to put out there? And then what do you think about in terms of what type of loss might we expect to see in '24 based on your rate and growth outlook today?

#### **Megan Nicole Binkley**

Chief Financial Officer

Thanks, Elyse. So as we noted in our opening remarks, our results in 2023 are really a testament to the improvements that we've made in pricing and underwriting and the work that we've done to optimize our expense base over the past 2 years. You're seeing really significant results from us on a year-over-year basis. And that puts us in a situation where if we were to stop investing in discretionary marketing spend tomorrow, we believe we would be profitable in the very short term. However, we don't think that, that's really the right answer for the long-term success of the business or for our shareholders.

And so as we continue to see opportunities to grow share profitably, we're going to continue to execute on that this next year. And our timing to profitability is heavily dependent on, one, the competitive landscape and two, our appetite for growth. So the improved underwriting results that we've seen have also translated into a reduction of our reinsurance costs on a current basis and also into 2024. You saw those changes that we made to our quota share reinsurance program really flow through results for the first time in Q4. And you're seeing our gross loss and LAE and net loss and LAE ratios really begin to converge within single digits. And we expect that this is going to have a material impact on our timeline for reaching profitability.

And just to be clear as well, when we say profitability, we do mean GAAP net income. And as we look to 2024, we do expect that on a full year basis that our net combined ratio is going to continue to improve compared to full year 2023. So I would say, in summary, we haven't pinpointed a specific quarter on our profit timeline, but we don't expect that it's multiple years from now. We believe that we've pulled very meaningful levers in the business to accelerate that path to profit and build long-term value for the business and for our shareholders. We've got a very positive outlook on our path to profitability, which is really our top priority with our existing capital.

#### **Elyse Beth Greenspan**

Wells Fargo Securities, LLC, Research Division

And then maybe just one more, right? You guys saw a good pickup in policy growth sequentially in the quarter. How are you thinking just about shopping some of the earlier questions, right, in ad spend kind of picking up to start the year? How are you thinking about policy growth trending in the first quarter and then really throughout all of 2024?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

Yes. Really through first quarter, we've continued -- first quarter to date, we've actually continued to increase PIF. And so we are still growing. And we feel very good about our ability to continue to grow. And it's not -- again, it's not just the Direct channel, and it's not just our ability to deploy marketing, although we do feel good there. We believe there's many long-term levers. A big one being our partnership and embedded strategy and continuing to have those partners. Like I said, we've actually added multiple new partners already this quarter. And we also continue to iterate on our pricing and underwriting and

continuing to get more competitive prices. And then lastly, we're looking for a state expansion and continued marketing channel expansion.

So we think we have a lot of levers at our disposal to continue to drive growth, and we think we're just in the very beginnings of growth. And Root's still a relatively small insurance company when you look at the market. So I think we're going to continue to see growth, and we feel good about our path there. I think it will be diligent growth that you see from us in 2024.

#### **Operator**

Your next question comes from Mike Ward with Citi.

#### **Michael Augustus Ward**

Citigroup Inc., Research Division

So maybe just on retention. It seems like you've been kind of gradually turning back up ad spend last couple of quarters. So just wondering what you're seeing in terms of early retention stats on new business and maybe specifically the -- some of the Direct business written last year that's come up for a renewal, too?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

That's a good question. We're continuing to see retention rates actually up year-over-year. And that's both a function of our prices. It's also a function of our ability to target higher retaining customers. So we're seeing nice trends in retention.

#### **Michael Augustus Ward**

Citigroup Inc., Research Division

Okay. And so maybe on kind of like the demographic breakup, just curious how your sort of customer profile today differs from where it's been historically?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

I'd say that really, we still really target younger folks usually between the ages of 25 and 35 as our primary target audience. We do still skew monoline auto. And so we are still seeing that really be our bread and butter. We are shifting a bit more towards a preferred customer mix, so higher credit and some other demographic variables. But in general, we really are seeing our customer demographics stay pretty consistent.

#### **Michael Augustus Ward**

Citigroup Inc., Research Division

Got it. And then maybe just somewhat open ended, but for 2024, just kind of wondering what you see -- if you see any risks to margins this year?

#### **Alexander Edward Timm**

Co-Founder, CEO & Director

I'd say we're constantly monitoring the environment. particularly the inflationary environment. We have seen used car prices steady out to actually decline somewhat. And we've seen -- but we still see healthy inflation in many other areas. We're constantly monitoring that, and we are prepared to take rate appropriately as we see that come through. And if we do see that come through, you may expect us to pull back on growth. But really, we feel good about where we're positioned today.

#### Operator

There are no further questions at this time. This will conclude today's conference call. Thank you for joining us today. You may now disconnect.

Copyright © 2024 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.

© 2024 S&P Global Market Intelligence.